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Moving beyond mother and baby: Perinatal mental health and the couple relationship

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This thesis is submitted in partial fulfilment of the requirements for the degree of Doctorate in Clinical Psychology

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List of abbreviations

A&E	Accident and Emergency
AMED	The Allied and Complementary Medicine Database
ANOVA	Analysis of variance
APA	American Psychiatric Association
BDI	Beck Depression Inventory
BPS	British Psychological Society
CES-D	Center for Epidemiological Study's Depression Scale
CIDI-SF	Composite Diagnostic Interview – Short Form
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CRD	Centre for Reviews and Dissemination
DARE	Database of Abstracts of Reviews of Effects
DAS	Dyadic Adjustment Scale
DSM	The Diagnostic and Statistical Manual of Mental Disorders
EPDS	Edinburgh Postnatal Depression Scale
GP	General Practitioner
IBM	Intimate Bonds Measure
IPA	Interpretative Phenomenological Analysis
MBU	Mother and Baby Unit
NHS	National Health Service

NICE	National Institute for Health and Care Excellence
NRES	National Research Ethics Service
PICOS	Population, phenomenon of Interest, Context, Outcome, Study design
PND	Postnatal depression
PPP	Postpartum psychosis
SIGN	Scottish Intercollegiate Guidelines Network
STROBE	Strengthening the Reporting of Observational studies in Epidemiology
UK	United Kingdom
US	United States

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Declaration

This thesis is submitted to the University of Warwick and Coventry University in support of my application for the degree of Doctor of Clinical Psychology. It has been composed by myself and has not been submitted in any previous application for any degree at another university. This work has been conducted under the supervision of Dr Fiona MacCallum (Associate Professor, University of Warwick), Dr Carolyn Gordon (Clinical Psychologist, Coventry University) and Dr Mary McGuinness (Consultant Clinical Psychologist, Birmingham & Solihull Mental Health NHS Foundation Trust). In addition to providing ongoing research supervision, these supervisors read and commented upon drafts of each chapter. Additionally, validity checks of my interview coding were conducted by a colleague. There has been no further collaboration with others and all material in this thesis is my own work.

Chapter One (literature review) and Chapter Two (empirical paper) will both be prepared for submission to *Archives of Women's Mental Health*.

Chapter Three (reflective paper) will be prepared for submission to *Reflective Practice*.

Please see Appendices A and S for the respective author instructions, which have informed the presentation of each paper.

Summary

This thesis consists of three papers; a literature review, an empirical paper and a reflective paper. The systematic literature review examines the associations between postnatal depression and factors within the couple relationship. Seventeen articles meeting inclusion criteria were identified through database and manual searches. The findings of these studies were reviewed and critically appraised. It was consistently found that postnatal depressive symptoms were associated with perceived poor quality partner support, relationship dissatisfaction, conflict, and discord. Methodological limitations, clinical implications and future research recommendations are considered. There is a need for screening and intervention for relationship difficulties in the perinatal period, along with further research including both members of the couple.

The empirical paper is a qualitative exploration of men's experiences of having a partner admitted to a Mother and Baby Unit for first episode postpartum psychosis. Seven men were interviewed using semi-structured interviews. The transcripts were analysed using Interpretative Phenomenological Analysis. Two main themes were identified. 'What the f**k is going on?' highlights men's experiences of confusion and uncertainty about what was happening to their partner, combined with feeling excluded from their partner's care. 'Time to figure out how your family works' explores the process of making sense of changes in roles, relationships and identities within the family in the context of postpartum psychosis. The themes are discussed and considered in relation to clinical implications, particularly the need for improved involvement of fathers in perinatal healthcare.

Finally, the reflective paper discusses the process of giving fathers a voice that has been lacking in perinatal mental health research. The challenges I experienced in listening to these men's stories are considered in the context of wider challenges to healthcare staff. The impact of this research on my own clinical and research practice is also discussed.

Total word count: 19,401 (excluding tables, figures, references and appendices)

Chapter One: Literature Review

The role of the couple relationship in postnatal depression: A systematic review of the literature

In preparation for submission to *Archives of Women's Mental Health*

(see Appendix A for author instructions)

Chapter word count (excluding tables, figures and references): 7997

1.1 Abstract

Purpose: An unsatisfactory couple relationship is consistently considered a risk factor for postnatal depression. This systematic review aimed to critically evaluate the evidence regarding relationship factors which are predictive, maintaining or protective of maternal and paternal postnatal depression.

Methods: Following database, reference and citation searches, seventeen articles meeting the inclusion criteria were identified. The findings of these studies were reviewed and critically appraised.

Results: Findings suggested depressive symptoms were associated with perceived poor quality partner support, relationship dissatisfaction, conflict and discord. The relationships between depressive symptoms, reduced partner support and relationship dissatisfaction were broadly similar for women and men, however conflict appeared to play a stronger role in depressive symptoms for men than women.

Conclusions: Several relationship factors were consistently implicated in postnatal depressive symptoms. Conclusions regarding the direction and strength of relationships between variables remain tentative due to limitations of the reviewed studies. Despite this, heightened understanding of relationship factors' roles in postnatal depression can improve screening and intervention. Further involvement of couples in research and interventions for postnatal depression is warranted.

Keywords: *postnatal depression, relationships, mothers, fathers, couples*

1.2 Introduction

1.2.1 Postnatal depression

Maternal perinatal mental health is receiving increasing public attention and is now seen as a major public health issue (Bauer, Parsonage, Knapp, Iemmi & Adelaja, 2014). However, many women do not seek help due to embarrassment, failure to recognise symptoms or fears their baby will be taken away (Boots Family Trust, 2013). Depression is considered one of the most common perinatal mental health difficulties, with midwives and primary care clinicians being encouraged to screen for depression throughout the pregnancy and postnatal period (National Institute of Care Excellence [NICE], 2014). It is estimated 10 to 15% of women will experience postnatal depressive symptoms, with many of these experiencing major depression (Gaynes et al., 2005; O'Hara & Swain, 1996). Postnatal depression (PND) is also being increasingly recognised in men (Goodman, 2004). PND is not a distinct diagnostic category and clinical diagnosis is determined by meeting criteria for a major depressive episode according to the DSM-V, within the first four weeks of postpartum (American Psychiatric Association [APA], 2013). However, research and clinical practice often considers a wider range of symptom severity and periods of up to one year postpartum (O'Hara & Swain, 1996).

As well as affecting the mother, maternal depression in the perinatal period is associated with negative effects on children's early cognitive and emotional development, which may persist long-term (Bauer et al., 2014; Beck, 1998; Grace, Evindar & Stewart, 2003). PND has also been found to negatively affect mother-infant interactions, resulting in insecure attachment and associated behavioural difficulties (Murray, 1992). The effects of perinatal mental health difficulties on

mothers and their children can incur significant costs to the economy, prompting calls to improve perinatal mental health care to benefit families (Bauer et al., 2014).

1.2.2 Social support in the perinatal period

It has been consistently found that women who do not receive adequate social support during pregnancy are more likely to develop PND (Robertson, Grace, Wallington & Stewart, 2004). Instrumental support (practical assistance with tasks) and emotional support in particular are negatively associated with PND (Beck, 2001; O'Hara & Swain, 1996; Robertson et al., 2004). Additionally, perceived social isolation during pregnancy has been found as a strong risk factor for postnatal depressive symptoms (Nielsen Forman, Videbech, Hedegaard, Dalby Salvig & Secher, 2000; Seguin, Potvin, St-Denis & Loiselle, 1999). Conversely, social support may act as a protective factor against PND, with higher levels of support being associated with lower stress and better adjustment postpartum (Haslam, Pakenham & Smith, 2006; Terry, Mayocchi & Hynes, 1996). Social support could protect against stress both through an overall effect of integration in a social network, and through the availability of social resources which are responsive to a person's needs (Cohen & Wills, 1985).

Research into the effects of social support on PND has not always differentiated between different sources of support. Some research has suggested parental support is more significantly protective or predictive of PND than the spousal relationship, particularly in the early adjustment after birth (Haslam et al., 2006; Matthey, Barnett, Ungerer & Waters, 2000). However, there is increasing evidence to suggest the spousal relationship is distinct from other types of social support and may have different effects on the development of PND (Haslam et al., 2006). There is also a

growing body of research linking difficulties in the couple relationship with increased likelihood of PND (Robertson et al., 2004).

1.2.3 The couple relationship and PND

Becoming a new parent brings a number of challenges and a period of adjustment for most couples. Parents are required to negotiate and adjust to new caring roles, the burden of childcare, and reduced time for socialising, which may place added strain on the relationship (Cowan & Cowan 1988; Robertson et al., 2004). Despite this, not all couples experience a negative effect on their relationship, with some reporting increases in marital satisfaction (Cowan & Cowan, 1995). Whilst some degree of adjustment is expected for new parents, women who report marital problems or a 'poor' relationship during pregnancy are significantly more likely to go on to develop PND (Beck, 2001; O'Hara & Swain, 1996; Robertson et al., 2004). Marital dissatisfaction and low spousal support have also been found as risk factors for PND in men and women from different cultures (Gao, Chan & Mao, 2009; Nasreen, Kabir, Forsell & Edhborg, 2011; Wee, Skouteris, Pier, Richardson & Milgrom, 2011). Furthermore, experiencing domestic violence in the perinatal period has been consistently linked with PND in women (Howard, Oram, Galley, Trevillion & Feder, 2013).

Relationship difficulties are likely to have a more complex association with PND than simply acting as a linear risk factor; difficulties may also arise or be exacerbated as a result of PND. It has been suggested women with PND may be more likely to report lower amounts of perceived social support than they actually receive, perhaps as a result of having a more negative general perspective (Logsdon, Birkimer & Usui, 2000). Additionally, research suggests people who are depressed are less likely

to provide support to others (Wood, Saltzberg & Goldsamt, 1990). Thus, partners of people with PND may feel less supported during a time of increased stress for both members of the couple, placing additional strain on the relationship. Qualitative research suggests men experience their partner's PND as causing major disruption to their lives, leading to long-term effects on their relationships (Meighan, Davis, Thomas & Droppleman, 1999).

Studies have found comorbidity of PND within couples, with couple morbidity being more likely in the postnatal period than antenatally (Matthey et al., 2000). Matthey et al. (2000) suggest this supports the presence of shared risk factors for PND, with relationship difficulties having a more significant effect as time progresses.

Similarly, maternal PND has been found as the strongest predictor of paternal PND (Goodman, 2004). The interaction between PND and relationship difficulties may provide an understanding of how children are affected by parental mental health difficulties. Marital conflict has been suggested as a moderating factor between parental mental health difficulties and subsequent developmental difficulties in children (Cummings, Keller & Davies, 2005; Ramchandani & Psychogiou, 2009).

Whilst many studies have identified links between PND and the quality of the couple relationship in the antenatal and postnatal period, the precise nature of these associations remains unclear. Many of the discussed studies and reviews provide a broad definition of relationship quality and the variables assessed lack specificity. As such, it has not been clearly established what specific aspects of a couple relationship are predictive, protective or maintaining of PND. Understanding the nature and role of relationship factors involved in the development of PND may enable improved identification and provision of support for couples experiencing difficulties.

1.2.4 Aims for review

The question “What is known about the role of the couple relationship in the course of postnatal depression?” was used to determine the following aims:

- i) To systematically evaluate the evidence regarding factors within the couple relationship which are predictive, protective or maintaining of PND in new parents.
- ii) To assess the quality of the current research and make recommendations for future research.
- iii) To consider the identified relationship factors in the context of implications for clinical practice.

Given the increasing attention paid to PND in new fathers, it was decided the review would focus on studies of men as well as women. As PND is not a distinct diagnostic category, it was defined as the presence of clinically significant symptoms of depression in the postnatal period, up to one year after birth. Whilst the DSM-V (APA, 2013) specifies postpartum onset as the first four weeks following birth, the extended classification of one year was utilised to reflect and be inclusive of the wider focus of perinatal research and clinical practice (O’Hara & Swain, 1996). It was decided only quantitative studies would be included, due to the review’s specific focus on the size and direction of the direct links between PND and couple relationship factors which have been clearly defined and measured. The inclusion of qualitative studies was not thought to meet these aims as the relationships between factors would not be measurable.

1.3 Method

1.3.1 Search strategy

The search criteria were designed to be broad to facilitate an exploratory stance, given the lack of previous reviews in this area. Search terms were informed by the above aims. Additional variations of search terms were identified through exploring published research across the field (Table 1).

An initial search of the Cochrane Database of Systematic Reviews and the Database of Abstracts of Reviews of Effects (DARE) was conducted to check for existing systematic reviews in this area.

Table 1: Search terms used to identify relevant papers for review

Concept	1. Postnatal Depression	2. Partner	3. Relationship
Search Term	Postnatal Depression	Father Spouse Couple Husband Significant Other	Relationship
Additional variations	"Post* depress*" "Puerperal depress*" "Peri* depress*"	Partner* Father* Spous* Couple* Husband* "Significant other*"	Relation* Marital

* represents truncations for variation of terminology

A systematic literature search was carried out on 1st December 2014 and repeated in April 2015. The above terms were used to search paper titles and abstracts in PsycINFO, Medline, Embase, CINAHL, AMED and Ebsco databases. Language and publication type limits were applied to database searches according to the inclusion and exclusion criteria detailed below. The resulting citations were imported

to Refworks, where duplicate references were removed. Full text copies of potentially suitable articles were obtained and assessed against inclusion and exclusion criteria. Finally, hand searches of reference lists and citations of studies selected for review were conducted to identify further relevant papers.

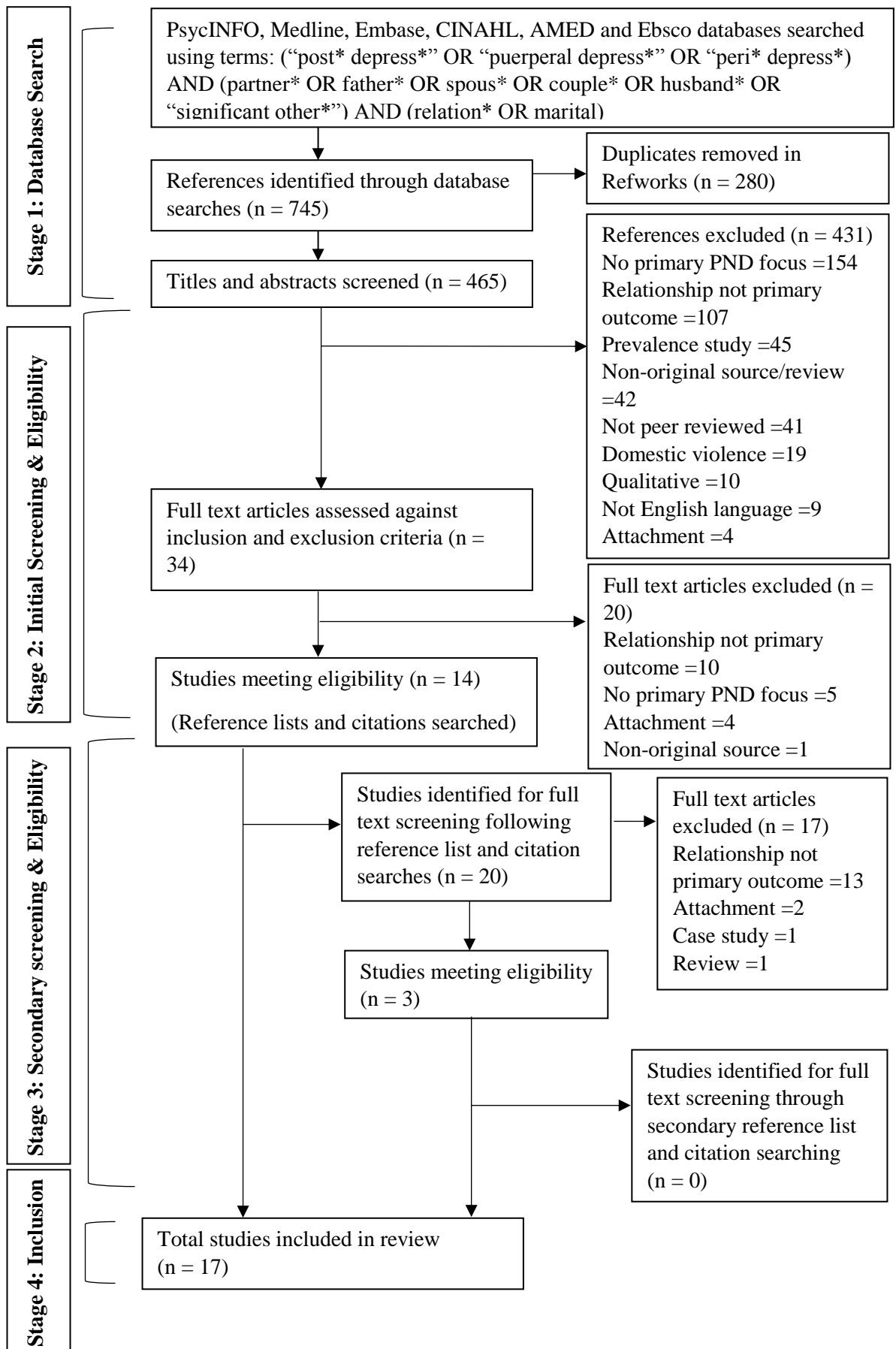
1.3.2 Inclusion and Exclusion Criteria

See Table 2 for the inclusion and exclusion criteria used to assess identified papers for eligibility. No restrictions were placed on the study publication year.

Table 2: Inclusion and exclusion criteria for papers

Inclusion Criteria	<p>Paper was published in a peer reviewed journal.</p> <p>Symptoms of depression were clinically indicated through validated screening tools or diagnostic criteria in at least one distinct group of participants, up to one year postpartum.</p> <p>At least one measure of relationship functioning was included as a primary outcome.</p> <p>Quantitative methodology and statistical analyses were used to examine links between relationship functioning and postnatal depression.</p> <p>Participants included female and/or male participants.</p>
Exclusion Criteria	<p>Were a non-original source (e.g. reviews, commentary, book chapters, letters, conference proceedings or discussion pieces).</p> <p>Were not written in English.</p> <p>Utilised case study or case-series design methods.</p> <p>Included participants with significant primary comorbidities (e.g. substance abuse).</p> <p>Included participants reporting a pre-existing, current diagnosis of depression, not specific to the perinatal period.</p> <p>Reported only prevalence rates of relationship factors associated with postnatal depression.</p> <p>Focused primarily on assessing attachment style, due to debates in the literature as to whether this is an individual or relational factor.</p> <p>Focused primarily on domestic violence or abusive relationships, to avoid overlap with existing reviews.</p>

Figure 1: Flow diagram illustrating study selection process



1.3.3 Search results and Study Selection

Figure 1 provides details of the numbers of articles identified through searching, selected for screening and excluded at each stage of the study selection process. Reasons for exclusion of articles are provided at each stage.

1.3.4 Data extraction

A data extraction tool was developed to collect and synthesise relevant information from each of the studies selected for review (Appendix B). The form was informed by the PICOS framework (Joanna Briggs Institute, 2011), to gather information regarding the Population, phenomenon of Interest, Context, Outcome, and Study design, in addition to guidelines from the Centre for Reviews and Dissemination (CRD, 2009).

1.3.5 Quality appraisal

Each of the selected studies were assessed for methodological quality, to establish the influence of any bias within the study design or conduct on the relevance of its findings (CRD, 2009). All of the identified studies utilised observational methods, for which there is no single recommended quality assessment framework (Sanderson, Tatt & Higgins, 2007). As such, an appropriate tool was developed by the lead researcher for the purpose of the review (Appendix C). In line with recommendations from Sanderson et al. (2007), the Strengthening The Reporting of Observational studies in Epidemiology (STROBE) statement and checklist were used as a basis for the tool (von Elm et al., 2008) (see Appendix D). Guidance from the NICE (2012) and CRD (2009) was also referred to.

Each of the resulting thirty checklist items were categorically rated as ‘yes’, ‘partial’, ‘no’, ‘not reported’ or ‘not applicable’ with qualitative comments noted alongside. Ratings were based on NICE (2012) guidelines, detailed in Appendix E. Numerical summary scores were not calculated due to concerns regarding inconsistent weighting of items on such scales (Sanderson et al., 2007; Greenland & O’Rourke, 2001). The information gathered was instead used to inform a qualitative critique of the evidence, which is referred to throughout the review. As such, no studies were excluded on the basis of being considered poor quality.

1.4 Results

1.4.1 Summary of studies

The seventeen studies selected for review are summarised in Table 3. Only measures and findings associated with relationship variables and PND are detailed. Additional variables not relevant to the research aims will not be further discussed.

All of the studies employed observational methods: seven prospective cohort design; six retrospective cohort design, conducting secondary analysis of data collected in earlier studies; three cross-sectional design, and one case-control design. Eleven of the studies recruited only female participants and six recruited both females and their male partners. The measures used to assess both PND and relationship factors varied substantially across the studies. Three main themes in the study findings were identified based on the relationship variable measured: support, conflict or stress, and relationship satisfaction and adjustment. The study findings will be grouped and reported according to each of these themes. Several studies examined multiple relationship factors, which will be considered independently within each theme. A summary of the quality assessments for each paper is provided in Appendix F.

Table 3: Summary of selected papers

Reference	Sample	Design, outcome measures and statistics	Key findings and associated statistics
Akincigil, Munch & Niemczyk (2010)	Demographics: Females only $n=4348$; age=46% 23-34 years; 47.6% Black, 26.9% Hispanic; 33.8% educated less than high school Recruitment: From hospital after delivery. Secondary analysis of a sample shared with a previous study (Reichman, Teitler, Garfinkel & McLanahan, 2001)	Design: Retrospective cohort Depression measure: Major Depressive Episode questions from Composite International Diagnostic Interview-Short Form (CIDI-SF) Relationship measure: Non-standardised questions measuring: disagreement about pregnancy, violence, supportiveness. Statistics: Logistic regression modelling	Once relationship quality was controlled for, marital status did not significantly predict depression ($\beta = 0.64$ n.s. ¹), Higher quality relationship at birth acted as a protective factor for depression ($\beta = 0.89^{*1}$). Women more likely to be depressed if there was a disagreement about the pregnancy ($\beta = 1.41^{*1}$). Pseudo $R^2 = 0.0404$ for model.
Banker & LaCoursiere (2014)	Demographics: Females only $n=1568$; age=35.6% 26-30; 82.5% White; 32.1% 3-4 years college education Recruitment: From hospital after delivery. Secondary analysis of a sample shared with a previous study (LaCoursiere, Baksh, Bloebaum & Varner, 2006)	Design: Cross-sectional Depression measure: Edinburgh Postnatal Depression Scale (EPDS) Relationship measure: Pregnancy Risk Assessment Monitoring System Statistics: Hierarchical and multiple regression analysis	Couple stress was a significant predictor of depressive symptoms ($\beta = .223$, $t = 6.794^{***}$, $R^2 = .079$, $F = 17.366^{***1}$). A supportive relationship protected women from depression even when at risk (biological vulnerability, personal or family history of depression) (Risk x couple support: $\beta = -.133$, $t = -1.943^*$, $R^2 = .113$, $F = -1.943^{*1}$).
Dennis & Ross (2006)	Demographics: Females only $n=396$; M age=29; 94% Caucasian; 42.3% college or diploma education, 24.6% university degree or higher; 41.3% income >\$60,000 Recruitment: from antenatal health services or during discharge follow-up after delivery. Sample shared with previous study (Dennis, Janssen & Singer, 2004)	Design: Retrospective cohort Depression measure: EPDS Relationship measures: Social Provisions Checklist, Postpartum Partner Support Scale, Shortened Quality of Relationships Inventory Statistics: Multiple regression	Perception of low partner support and high conflict (Partner tries to change me: $\beta = -.16$, $t(394) = -3.08^{**}$ and working hard to avoid conflict: $\beta = -.16$, $t(394) = -2.98^{**}$, $F = 25.20^{***1}$) predicted probable depression. Lower perceptions of social integration ($\beta = -.29$, $t(394) = -6.66^{***}$, $F = 44.46^{***1}$), partner encouragement to seek help ($\beta = -.17$, $t(394) = -3.18^{**}$), and higher disagreement with how to take care of baby ($\beta = -.19$, $t(394) = -3.65^{***}$, $F = 26.03^{***1}$).linked to depression.

Don & Mickelson (2012)	<p>Demographics: Couples $n=104$ (total $n=208$); Female M age=28.06; Male M age=29.99; 88% White; 75% college educated; 72% middle to upper income</p> <p>Recruitment: From antenatal classes and online message boards</p>	<p>Design: Prospective cohort, with cross-sectional model proposed</p> <p>Depression measure: shortened Postpartum Depression Screening Scale</p> <p>Relationship measure: National Comorbidity Survey spousal support subscale, UCLA Social Support Inventory negative interactions subscale, Relationship Assessment Scale</p> <p>Statistics: Structural equation/path modelling</p>	<p>Strong cross-sectional support of model proposing spousal support and relationship satisfaction explain pathways between maternal and paternal depressive symptoms at 1 month ($\chi^2(4, N = 92) = 6.06, p = .19, CFI = .98, RMSEA = .08$) and 9 months postpartum ($\chi^2(4, N = 83) = 4.45, p = .35, CFI = 1.00, RMSEA = .04$).</p> <p>Partial longitudinal support of model ($\chi^2(9, N = 78) = 4.17, p = .76, CFI = 1.00, RMSEA = .00; \Delta\chi^2(1, N = 78) = 15.30^{***}$).</p> <p>Spousal support the primary explanatory pathway.</p>
Fagan & Lee (2010)	<p>Demographics: Adolescent females $n=100$; M age=17; 41% Black or Latina; years of education $M=10$; 13% in paid employment</p> <p>Recruitment: From obstetrics/gynaecology hospital units in antenatal period. Data collected from previous study with a sample of adolescent male partners (Fagan, 2008)</p>	<p>Design: Retrospective cohort analysis</p> <p>Depression measure: Center for Epidemiological Study's Depression scale (CES-D)</p> <p>Relationship measures: Parental Childcare Scale, 'How involved are you during pregnancy?', Satisfaction with involvement – likert scale questions, Coparental Cooperation measure, Coparental Conflict Scales</p> <p>Statistics: Correlation, multiple regression</p>	<p>Postnatal conflict increased ($r(98) = .28^{**}$) and paternal support of mother decreased ($r(98) = -.22^*$) risk of depression.</p> <p>Mothers' satisfaction with father involvement significantly related to lower depression levels ($r(98) = -.28^{**}$), rather than perception of the degree of father care with infant ($r(98) = -.06$ n.s.).</p> <p>Mothers' sense of competence significantly associated with depression ($r(98) = -.65^{****}$) and mediated relationship between satisfaction with father involvement and depression ($\beta = -.30^{**}, F = 4.46^{****}, R^2 = .42^1$).</p>
Gremigni, Mariani, Marracino, Tranquilli & Turi (2011)	<p>Demographics: Females only $n=70$; M age=31.17; 85.7% secondary school graduates</p> <p>Recruitment: From public health clinic in antenatal period</p>	<p>Design: Prospective cohort</p> <p>Depression measure: EPDS</p> <p>Relationship measures: Support Expectations Index, Dyadic Assessment Scale (DAS), Expectancy Confirmation Scale</p> <p>Statistics: Correlation, binary logistic regression</p>	<p>Violated expectations of partner support associated with increased depression, independent of other stressors e.g. conflict ($\beta = 1.11, \text{Wald } \chi^2(1) = 4.81^*, \text{Exp. } \beta(\text{OR}) = 3.02$).</p>

Hock, Schirtzinger, Lutz & Widaman (1995)	<p>Demographics: Couples $n=142$ (total $n=284$) Female M age=28.04; education $M=15.5$ years Male M age=30.00; education $M=16.6$ years 93% of sample Caucasian, M family income=\$50,598 Recruitment: At antenatal home visits</p>	<p>Design: Prospective cohort Depression measure: CES-D Relationship measure: Male-Female Relations Questionnaire, Marital Comparison Level Index Statistics: Correlation, hierarchical regression analysis</p>	<p>Positive relationship between depressive mood and maternal traditional sex role attitudes (Pregnancy $r = .17^*$, 6 weeks $r = .23^{**}$, 9 months $r = .23^{**}$). No significant relationship between maternal marital satisfaction and depression in pregnancy but significant inverse relationship by 6 weeks postpartum (Pregnancy $r = -.03$(n.s.), 6 weeks $r = -.21^*$, 9 months $r = -.49^{***}$). Significant negative relationship between paternal marital satisfaction and maternal postpartum depression (9 months $r = -.28^{**}$).</p>
Kerstis, Engstrom, Sundquist, Widarsson & Rosenblad (2012)	<p>Demographics: Couples $n=305$ (total $n=610$). Depressed female M age=30.6. Non-depressed M age=29.9. Depressed male M age=32.5. Non-depressed M age=33.0. Most of sample education to high school or university level Recruitment: At first visit to Child Health Centre after birth. Part of ongoing cohort study</p>	<p>Design: Prospective cohort Depression measure: EPDS Relationship measures: Dyadic Consensus Scale (DCS), DAS Statistics: Correlational analysis</p>	<p>Differences in perceived levels of discord between mothers and fathers, fathers estimated more disagreement. Marital discord and depression correlated (Mothers $r(258) = -.253^{***}$. Fathers $r(250) = -.313^{***}$). Different aspects of discord correlated for mothers and fathers.</p>
Logsdon, McBride & Birkimer (1994)	<p>Demographics: Females only $n=105$; M age=25.9; 98% Caucasian; years of education past high school $M=2$ Recruitment: Through private obstetricians, prenatally</p>	<p>Design: Prospective cohort Depression measure: CES-D Relationship measure: Postpartum Support Questionnaire Statistics: Correlation & general model multiple regression</p>	<p>Women did not receive significantly less postpartum help than expected (statistics not reported). Lower levels of postpartum help were not associated with depression (statistics not reported). Deviations in support expected/received multiplied by importance was predictive of depression ($\beta = .29^{**}$, $R^2 = .384$; $R(4, 85) = .62^{***1}$). Perceived postpartum closeness to partner was negatively related to depression ($\beta = -.38^{***1}$).</p>

O'Hara (1985)	<p>Demographics: Couples $n=51$ (total $n=102$). Female M age=26.2; years of education $M=15.2$. Male age not reported; years of education $M=16.43$ 98% of sample Caucasian</p> <p>Recruitment: During antenatal visit Males recruited after females agreed to participate in larger, separate study (O'Hara, Neunaber & Zekowski, 1984)</p>	<p>Design: Retrospective cohort</p> <p>Depression measure: Beck Depression Inventory (BDI). Semi-structured interview for symptom severity for females only.</p> <p>Relationship measures: DAS, Postpartum Social Support Questionnaire</p> <p>Statistics: Correlational & ANOVA</p>	<p>Significant positive correlation between each of husbands' and wives' depression ratings ($r = .233^*$) and satisfaction ratings ($r = .577^{**}$). Husbands' marital satisfaction significantly predicted wives' satisfaction with their support ($F(2, 48) = 3.94^*$).</p>
Page & Wilhelm (2007)	<p>Demographics: Females only $n=51$; M age=29.47; 71% Caucasian; 86% some or completed college education</p> <p>Recruitment: At antenatal visit to obstetric clinic, word of mouth and flyers. Sample part of ongoing larger study</p>	<p>Design: Cross-sectional</p> <p>Depression measure: CES-D</p> <p>Relationship measure: Quality of Relationships Inventory, support & depth subscales</p> <p>Statistics: Regression analysis</p>	<p>Negative correlation between relationship depth/support and depression but significance lost due to high multi-collinearity in regression model and small sample size ($\beta = -.207^*$, $R^2 = .561$, $F(3, 47) = 20.021^{***1}$). Relationship depth did not moderate family arguments and depressive symptoms. Support also non-significant moderator.</p>
Salmela-Aro, Aunola, Saisto, Halmesmaki & Nurmi (2006)	<p>Demographics: Couples. Females $n=320$ (M age=29.25) and males $n=260$ (M age=30.85) 69% of women employed</p> <p>Recruitment: Women and partners recruited through antenatal community midwife contact</p>	<p>Design: Prospective cohort</p> <p>Depression measure: BDI-II (BDI second edition)</p> <p>Relationship measure: DAS</p> <p>Statistics: Multilevel latent growth modelling</p>	<p>Changes in depressive symptoms and marital satisfaction during pregnancy were characteristic of relationship. Postnatal changes characteristic of relationship and individual spouses. Couples with initial high marital satisfaction showed a later decrease, and vice versa (final model fit: $\chi^2(50) = 92.73$, $CFI = .97$; $RMSEA = .05$).</p>
Schweitzer, Logan & Strassberg (1992)	<p>Demographics: Females only. Current PND, $n=16$ (M age=29.4). Recovered PND, $n=16$ (M age=30.3). Control, $n=31$ (M age=28). No further demographics.</p> <p>Recruitment: From current (current PND) or previous (recovered PND) attendance of</p>	<p>Design: Case-control</p> <p>Depression measure: BDI</p> <p>Relationship measure: Intimate Bonds Measure (IBM)</p> <p>Statistics: ANOVA, Scheffe post-hoc testing</p>	<p>Both current and recovered PND groups reported significantly lower levels of care ($F(2, 62) = 16.9^{**}$) and higher levels of control ($F(2, 62) = 24.1^{**}$) in relationship compared to control group. Uncaring/controlling partner insufficient by itself to produce significant levels of depression, likely other</p>

	PND support group. Control group recruited from a parenting group		factors involved.
Smith & Howard (2008)	<p>Demographics: Females only $n=582$; M age=21.28; 65% African-American; 44% not completed high school</p> <p>Recruitment: From health and social services in antenatal period. Sample from ongoing larger project</p>	<p>Design: Retrospective cohort</p> <p>Depression measure: BDI-II</p> <p>Relationship measure: 6 items from Life History Interview (from larger study)</p> <p>Statistics: Latent growth curve modelling</p>	<p>Paternal support declines early after birth.</p> <p>At 4 months postpartum a decrease in support was associated with a decrease in depression.</p> <p>After 4 months, an inverse relationship between support and depression was found. High support at one time point was associated with low depression at the next (final model fit: $\chi^2(25, N = 582) = 69.47^*$, $CFI = .98$, $RMSEA = .068$).</p>
Stapleton, Schetter, Westling, Rini, Glynn, Hobel & Sandman (2012)	<p>Demographics: Females only $n=272$; M age=30; 53% White, 21% Latina; 53% bachelor's degree or higher; 33% >\$90,000 household income</p> <p>Recruitment: From antenatal clinics. Sample from a larger study</p>	<p>Design: Retrospective cohort</p> <p>Depression measure: CES-D</p> <p>Relationship measures: Marital Adjustment Test, Social Support Effectiveness. Non-validated measure of pregnancy specific support needs</p> <p>Statistics: Structural equation modelling</p>	<p>Significant negative effects of interpersonal security and relationship satisfaction on distress.</p> <p>Mediated by perceived quality and quantity of partner support. Emotional support loaded the highest (final model fit: $\chi^2(177, N = 272) = 230.99^{**}$, $RCFI = .98$, $RMSEA = 0.034$).</p>
Whisman, Davila & Goodman (2011)	<p>Demographics: Females only $n=113$; M age=29.90; 68.6% White; 68.3% college graduates; median household income=\$66,000-70,000</p> <p>Recruitment: From obstetrics/gynaecology services and media announcements in antenatal period</p>	<p>Design: Prospective cohort</p> <p>Depression measure: Structured Clinical Interview for DSM-IV, BDI-II</p> <p>Relationship measure: DAS</p> <p>Statistics: Multilevel modelling</p>	<p>Relationship adjustment predicted depressive symptoms in women with a history of major depression ($\beta = -.214^{**}$ (concurrent), $\beta = -.042$ (n.s.) (lagged)).</p> <p>Depressive symptom levels were predictive of subsequent relationship adjustment ($\beta = -.057$ (n.s.) (concurrent), $\beta = -.054^*$ (lagged)).</p>

Wynter, Rowe & Fisher (2014)	<p>Demographics: Couples $n=172$ (total $n=344$). Female M age=30.6; 87.2% Australian; 65.7% completed post-secondary education; 50.6% professional occupation. Male M age=32.8; 82.6% Australian; 49.4% post=secondary education; 41.3% professional occupation</p> <p>Recruitment: From health settings in postpartum period. Secondary analysis of data from control arm of previous study</p>	<p>Design: Retrospective cross-sectional analysis</p> <p>Depression measure: EPDS</p> <p>Relationship measure: IBM</p> <p>Statistics: Correlation, dyadic analysis (multilevel modelling)</p>	<p>Criticism and coercion within the relationship was more strongly associated with depressive symptoms ($r(170) = .159^{**}$) than lack of affection or care ($r(170) = -.143^{**}$) for both women and men (dyadic analysis found no significant sex differences).</p> <p>Relationship quality was independently and significantly negatively associated with lower mood in partners (Partner's rating of care/EPDS score: $r(170) = -.170^{**}$; Partner's rating of control/EPDS score: $r(170) = .249^{***}$).</p>
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Note: * $P < .05$, ** $P < .01$, *** $P < .001$, **** $P < .0001$

¹. Not possible to fully report t-test results or degrees of freedom due to insufficient data in original article

1.4.2 Key findings

1.4.2.1 Theme 1: Support

1.4.2.1.1 Findings

Eleven studies examined links between partner support and PND; with six focused on pregnancy or postpartum specific support. Studies reported mixed results for the relationship between quantity of support received and PND. Three studies found a negative relationship between quantity of partner support in the perinatal period, and level of depression (Dennis & Ross, 2006; Smith & Howard, 2008; Stapleton et al., 2012). Dennis and Ross (2006) found significant associations between depressive symptoms and lower perceptions of partner providing social integration, encouragement to seek help, and help to cope with difficulties. Instrumental support was also significantly associated but demonstrated a smaller effect size than these other domains. Similarly, Stapleton et al. (2012) found perceived low emotional support was the strongest predictor of depressive symptoms in their study. It was also found that support mediated the effects of relationship satisfaction on emotional distress.

In contrast, Smith and Howard (2008) found that a decline in perceived instrumental support after birth was associated with a decrease in depressive symptoms up to four months postpartum. After this time point an inverse relationship between support and symptoms was found, consistent with the other studies. It was proposed this discrepancy could be understood as women finding usual sources of support less helpful immediately after giving birth, due to adjusting to their new maternal role. It may be that the nature of support a partner offers does not meet the needs of a new

mother during this period, and she may access other resources such as her parents (Cohen & Wills, 1985; Haslam et al., 2006).

Two studies found no relationship between quantity of postpartum specific support and depression (Fagan & Lee, 2010; Logsdon et al., 1994). Fagan and Lee (2010) found that despite a decrease in support from partners, it was mothers' satisfaction with support that negatively predicted depressive symptoms. They suggest the link between stress/support is moderated by mothers' own sense of parental competence, as the association between satisfaction with support and depressive symptoms was significantly reduced in mothers with a greater sense of competence. Similarly, Logsdon et al. (1994) found that mothers who both placed high importance on support and received less support than expected, showed higher rates of depressive symptoms. The quantity of support mothers reported they received and the difference between support expected/received did not independently predict symptoms. Gremigni et al. (2011) also investigated the role of support expectations; violated expectations of partner support were significantly associated with depressive symptoms, independent of other stressors.

A further five studies focused on the role of perceived partner support which was not specific to the perinatal period or childcare tasks. Akincigil et al. (2010) found emotional support from a partner significantly and independently predicted lower maternal depressive symptoms after controlling for social support from others. Page and Wilhelm (2007) examined relationship depth and support as moderators between family stresses and maternal PND. Whilst both were significantly negatively correlated with depressive symptoms, they were no longer significant when included in a multifactorial regression model due to high inter-correlation. Relationship depth

and support did not significantly mediate family stresses and depression; however the inclusion of relationship depth in a regression model resulted in a decrease in depressive symptoms. Most women reported a postpartum decrease in relationship depth.

Two studies found perceptions of a partner being highly controlling and uncaring were associated with increased PND symptomatology. Schweitzer et al. (1992) found this relationship in women both currently seeking support for PND, and those recovered from PND. The presence of this relationship in the recovered PND group led the authors to suggest an uncaring or controlling partner would be insufficient of itself to produce significant depression. They suggested other biological or psychological variables are likely to be involved in the onset of PND. Wynter et al. (2014) found the relationship between depressive symptoms and a controlling and uncaring partner was significant for both women and men, even after controlling for other PND risk factors, history of mental health problems and other sources of support. This suggests the couple relationship plays a key role in PND, thus partially addressing the queries raised by Schweitzer et al. (1992). Associations between men and women's depressive symptoms and relationship factors were complex and multi-directional. As such, they proposed studying maternal and paternal PND using separate models may lead to oversimplified conclusions about risk factors and the directions of relationships.

In an attempt to draw links between maternal and paternal PND, Don and Mickelson (2012) tested an explanatory model of possible connecting pathways. They found strong cross-sectional and partial longitudinal support for a model, in which spousal

support and relationship satisfaction acted as significant pathways between maternal and paternal PND. However, the model was not tested for paternal to maternal PND.

1.4.2.1.2 Critical appraisal

Most studies were limited in that support was assessed using either measures devised specifically for the study or individual items from larger retrospective data sets.

Whilst most authors reported the measures' psychometric properties, there was a lack of well validated and reliable measures of perinatal-specific support. This perhaps reflects the wide range in support constructs assessed across studies, making it difficult to draw consistent conclusions.

The timing of data collection should be considered, as previous research suggests mothers' support needs change over time (Matthey et al., 2000). Most studies restricted their follow-up period to up to three months postpartum. Whilst this is consistent with diagnostic definitions of PND, understanding of the long-term relationship between support and PND is limited. Some studies continued up to twenty-four months postpartum, however having few assessment points limited their ability to track changes over time (Akincigil et al., 2010; Hock et al., 1995; Schweitzer et al., 1992). Smith and Howard (2008) demonstrated changes in the relationship between support and depressive symptoms at various time points over two years, supporting the need for more long-term monitoring.

Several studies highlighted a complex relationship between support and depressive symptoms, with a variety of mediating factors implicated. These findings may partially explain the variance in findings regarding quantity of support and PND, as the relationship is perhaps more indirect. Wynter et al. (2014) in particular, highlighted the multi-directional relationships between support, PND and other

relationship variables across couples. However, there was a lack of studies attempting to provide statistical models of explanatory pathways. Furthermore, only two studies included both male and female participants. Whilst data collected from only one member of the couple could introduce issues of reliability and bias, this is perhaps less important given the focus on perceptions of relationship quality. A greater concern is the lack of information about the relationships between support and PND across both members of the couple, particularly given the possible cyclical nature of this relationship identified in previous research (Wood et al., 1990).

1.4.2.1.3 Summary

In studies finding a link between quantity of support and depressive symptoms, emotional support from a partner was more of a protective factor than instrumental support. Instrumental support may be better provided by other resources in the social network, with a lack of partner provided support being less detrimental to women in Smith and Howard's (2008) study and previous research (Haslam et al., 2006). However, as support from other sources was not measured, no firm inferences can be made.

Some studies found less partner support in postnatal activities such as child care, was significantly negatively associated with depressive symptoms. Lack of emotional and social support appear to be most strongly associated with symptoms. Others found no significant relationship between quantity of support and symptoms, suggesting mothers' satisfaction with support may be a better predictor. The relationship between support quality or quantity and depression may be moderated by several individual and relational factors. Additionally, some studies have found an uncaring or controlling partner is predictive of PND in both women and men. Several

limitations of these studies were identified, which will be further discussed throughout the review.

1.4.2.2 Theme 2: Relationship satisfaction and adjustment

1.4.2.2.1 Findings

Five studies focused on the role of relationship satisfaction and adjustment in PND. Salmela-Aro et al. (2006) found high levels of depressive symptomatology were associated with marital dissatisfaction in both women and their partners during pregnancy and postpartum. Shared increases of depressive symptoms in men and women related to simultaneous shared decreases in marital satisfaction, observed on both a couple and individual level. Similarly, O'Hara (1985) found very high correlations between women's and men's depressive symptoms, particularly in the second trimester of pregnancy. Men's depression at six weeks postpartum was highly correlated with women's depression at nine weeks, suggesting men's mood impacts on their partner. Men's relationship satisfaction predicted women's satisfaction with support, suggesting men satisfied with their relationship were more likely to provide satisfactory support.

Hock et al. (1995) found no significant relationship between maternal depressive symptoms and marital dissatisfaction during pregnancy. However, this relationship became significant by nine months postpartum due to a decline in marital satisfaction for both women and men, possibly as a result of relationship disruption following the birth. Men's postpartum marital satisfaction was significantly negatively associated with women's depressive symptoms, particularly if symptoms were experienced

during pregnancy. Men's traditional sex-role attitudes significantly contributed to women's depression in a multiple regression model.

Whisman et al. (2011) found lower relationship adjustment significantly predicted higher depressive symptoms in women. Depressive symptoms then had a further significant negative effect on adjustment. They suggested maternal depressive symptoms create additional stress in the relationship, contributing to the maintenance of depression (Davila, Bradbury, Cohan & Tochluk, 1997). Stapleton et al. (2012) also found a significant inverse effect of relationship satisfaction on postpartum depression, although this relationship was indirect and mediated by partner support. It was suggested relationship satisfaction creates a context in which a partner provides more satisfactory support, which in turn is associated with fewer depressive symptoms.

1.4.2.2.2 Critical appraisal

Over half of studies of relationship satisfaction included both male and female participants. These studies found women and men shared similar experiences of depressive symptoms and relationship satisfaction, whilst also showing individual variation. These findings support a more systemic understanding of the relationship between satisfaction and PND, given that men's mood, sex-role attitudes and satisfaction were associated with depressive symptoms in women. Most studies used well validated measures of relationship adjustment, with three using the DAS (Spanier & Filsinger, 1983). This allows for a clearer and more consistent comparison of findings across studies.

The use of statistical modelling approaches in three recent studies allowed exploration of the relationships and contribution of various factors (Salmela-Aro et

al. 2006; Stapleton et al., 2012; Whisman et al., 2011). From these analyses it appears relationship satisfaction, partner support and depressive symptoms are associated with one another; with these relationships being multi-directional within the couple relationship. However, whilst the statistical methods and temporal ordering of assessment points can provide improved estimates of causation, it is not possible to definitively conclude the direction of relationships between variables. In Whisman et al.'s (2011) study, it is highlighted that lagged analysis can examine how change in one variable is associated with another; however it is less effective for evaluating more chronic relationships. This is particularly relevant to their sample of women who had a history of major depression, creating further difficulty in examining cause and effect relationships. Additionally, none of these studies provided information about how sample size was calculated or whether samples reached sufficient power to meet significance for all variables.

1.4.2.2.3 Summary

All five studies of relationship satisfaction and adjustment found a significant inverse relationship with postnatal depressive symptoms. Most studies also found this association during the pregnancy period. This relationship was found for both women and men. Perceived partner support and men's traditional sex role attitudes are possible moderating factors of the relationship between satisfaction and depressive symptoms. The inclusion of women's partners and the use of consistent definitions and measures of relationship satisfaction are strengths of this research. However, despite statistical modelling of multiple variables allowing some exploration of directions of relationships, it is not possible to draw definite conclusions regarding causation due to the research methods used.

1.4.2.3 Theme 3: Conflict and stress

1.4.2.3.1 Findings

Four studies examined the link between PND and conflict or stress within the relationship for men and women. Banker and LaCoursiere (2014) reported partner conflict predicted depressive symptoms, with ‘partner tries to change me’ and ‘I have to work hard to avoid conflict’ variables showing significance. Couple stress significantly predicted depressive symptoms, with a non-stressed partner relationship considered a protective factor for women at risk due to history of depression. Similarly, Dennis and Ross (2006) reported perceived conflict with a partner predicted depressive symptoms for women. As with Banker and LaCoursiere’s (2014) study, Dennis and Ross (2006) found women with depressive symptoms were more likely to report their partner tried to change them, they had to work hard to avoid conflict and their partner made them angry.

Kerstis et al. (2012) found a positive relationship between discord and depressive symptoms in both women and men, with some differences between them. Estimated levels of discord and the correlation between discord and depression were higher for men than women. Higher ratings of discord in ‘socialising with family and friends’, ‘important decisions’ and ‘household tasks’ were associated with more depressive symptoms in both women and men. For women, depressive symptoms were associated with higher discord in ‘friends’ and ‘philosophy’; perhaps due to expectations that her partner will prioritise her and their child over friends. For men, symptoms were associated with higher discord in ‘recreational activities/leisure interests’, ‘time together’, and ‘career/personal decision’; perhaps feeling their partner does not have enough time to spend with them or they miss having time to

themselves after the birth. Finally, Akincigil et al. (2010) found disagreement with a partner about the pregnancy significantly predicted depressive symptoms after controlling for other variables, although this was measured with only one item.

1.4.2.3.2 Critical appraisal

Banker and LaCoursiere's (2014) and Dennis and Ross' (2006) finding that 'partner tries to change me' is significantly related to depressive symptoms, may reflect previously discussed links between depression and having a controlling partner. It may be that constructs of control and conflict are related to one another; however none of the relevant papers discuss this. Again, this may be an issue with lack of clearly defined constructs or multiple relationship factors playing a role in PND.

Kerstis et al.'s (2012) findings suggest conflict may be more closely associated to paternal than maternal PND. The authors suggest this may be a result of women having wider social networks than men (Antonucci, Akiyama & Takahashi, 2004). As discussed previously, the difference in findings for women and men supports systemic approaches to research of PND and inclusion of partners as participants.

1.4.2.3.3 Summary

All four studies found higher levels of partner conflict predicted more depressive symptoms. This relationship was found for women and men, although there were some discrepancies between the estimated degree and type of discord associated with PND. There may be some overlap between the construct of conflict and other relationship factors, such as relationship satisfaction or support.

1.4.3 Methodological characteristics and limitations

1.4.3.1 Aims

Fourteen studies identified the investigation of at least one couple relationship factor in relation to PND symptoms as a main research aim. In the remaining three, these factors were included as part of broader research aims involving other psychosocial variables which may have impacted on the specificity of these studies.

1.4.3.2 Participants

A summary of participant demographics and recruitment is provided in Table 3

Six studies included both women and their male partners. Five of these assessed both male and female symptoms of depression, whereas one study required fathers to only complete relationship measures. No studies focused exclusively on paternal PND, reflecting the general lack of research in this area. Therefore, the majority of results may only be applied to maternal PND. Additionally, all studies included only participants in heterosexual relationships. Specific gender effects have been discussed in section 1.4.2.

The mean age of participants in most studies was mid to late twenties, reflective of the approximate childbearing age in the Western countries where studies were conducted. One study focused exclusively on adolescent mothers (Fagan & Lee, 2010). The authors discuss features unique to adolescent parents such as ambivalence towards father involvement (Waller & Swisher, 2006), heightened involvement of the mother's parents, and increased likelihood of stress due to being unprepared for parenthood (Dellmann-Jenkins, Sattler & Richardson, 2003). Whilst

these findings may not be relevant to older mothers, the issues raised should be considered in studies including adolescent mothers within the participant group. One study introduced age as a covariate in the statistical analysis, after discovering mothers who did not provide complete data were significantly younger than those who did (Smith & Howard, 2008). However, no significant age effects were found in their final model. Several other studies included age in statistical analysis as a possible confounding variable, given younger age may be a risk factor for PND (Birkeland, Thompson & Phares, 2005). No significant confounding effects were found in these studies. Four studies excluded adolescents' participation. Most gave no reason but one stated the criteria was set to control for potential confounding effects (Dennis & Ross, 2006; Hock et al., 1995; Stapleton et al., 2012; Whisman et al., 2011). As such, the results of these studies may have limited generalisability to adolescent populations.

The majority of studies' participants lived with their partner or were in committed relationships. This prevents generalisation of findings to mothers or fathers who have more unstable relationships or do not live with the other parent. One study had a large number of participants classed as 'single', although this appeared to refer to the mother living apart from the child's father rather than having no relationship (Smith & Howard, 2008). Living apart was significantly associated with initial lower levels of postpartum support and higher depressive symptoms, however it did not influence change in support or symptoms over time.

Whilst several studies included participants with multiple children, many did not consider findings in the context of whether symptoms of depression related to the first child or not. Three studies stated inclusion criteria of the participant having or

expecting only one child (Gremigni et al., 2011; Hock et al., 1995; Logsdon et al., 1994), again to control for potential confounding effects. Recent research has found primiparous women may be more at risk of PND, so this should be taken into account in future studies (Di Florio et al., 2014).

Many studies did not set exclusion criteria related to complications in pregnancy. Some explicitly reported numbers of women who had experienced a complicated pregnancy, although did not consider this relevant to their findings (Akincigil et al., 2010; Banker & LaCoursiere, 2014). Three studies excluded women who had or were predicted to experience medical complications during pregnancy or birth, determined through medical records screening (Gremigni et al., 2011; Logsdon et al., 1994; Whisman et al., 2011). Again, these studies' findings should be applied tentatively to parents who have experienced complications. Several studies excluded participants with prior diagnosed mental health or substance use difficulties. One exception is Whisman et al. (2011), whose participants all had a history of major depression. The observed effects on relationship adjustment may therefore differ in magnitude to those in women with no history of depression (Post, 1992).

The majority of participants were white, middle socio-economic status and well-educated. Several studies noted this as a limitation which restricts generalisability to more diverse populations, and this is typical of most health research (Patel, Doku & Tennakoon, 2003). However, reporting of whether samples were reflective of the target population was generally limited. Three studies included a more diverse sample of participants, reflective of the recruitment areas and study aims (Akincigil et al., 2010; Fagan & Lee, 2010; Smith & Howard, 2008). Most research was conducted in the United States; the remainder in Europe, Australia and Canada. As

most studies recruited through healthcare settings, variance in access to health and social care systems should be taken into account when considering possible bias in demographics. As none of the studies were conducted in the United Kingdom, generalisation of findings to this population may be restricted.

Opportunistic sampling methods were most frequently used, introducing a possible self-selection bias. Demographic information of participants who dropped-out or declined to participate was limited. The studies which did consider differences in retained participants and those who withdrew found younger age, lower income, lower education, lower marital satisfaction, and being of non-White ethnicity was significantly associated with drop-out (Don & Mickelson, 2012; Salmela-Aro et al., 2006; Smith & Howard, 2008; Stapleton et al., 2012). Others found no significant differences (Gremigni et al., 2011). Approximately half of studies recruited participants after the birth of the child. A lack of assessment during pregnancy means there is limited information about how relationship quality and depressive symptoms change over the course of the perinatal period. No studies recruited participants before pregnancy, thus there is a lack of true baseline measurements. Findings informing the early identification or prediction of postpartum difficulties are therefore limited.

1.4.3.3 Nature of PND

A summary of measures used to assess symptoms of PND is provided in Table 3.

The majority of studies used the EPDS, CES-D or BDI/BDI-II. These measures are screening tools for depressive symptomatology and do not provide a clinical diagnosis of PND. All rely on self-report, which is generally considered to introduce

bias. However, this is unlikely to have a significant effect on applicability of findings, as the use of these measures likely mirrors clinical practice of PND screening. Most studies did not report any ways self-report bias was addressed within their methodology; however some used follow-up interviews to confirm symptom severity (O'Hara, 1985; Whisman et al., 2011).

Studies varied in the cut-off scores used to indicate clinical depression, for instance in studies using the EPDS, cut-off scores ranged from 9 to 12 out of 30. Only the EPDS has been specifically developed and extensively tested for validity and reliability with female perinatal populations (Gibson, McKenzie-McHarg, Shakespeare, Price & Gray, 2009). There is also support for its use with men (Matthey, Barnett, Kavanagh & Howie, 2001). There are some queries regarding the use of other depression measures, such as the BDI for identifying PND. This measure includes items which may be overrepresented in all new parents, particularly those identifying somatic changes (Pereira et al., 2014). However, some studies have supported its use as a PND screening tool (Su et al., 2007).

The variance in clinical cut-off scores and measures used limits consistent conclusions regarding the association of relationship factors with different degrees of depressive symptoms. Only one study measured PND with a tool consistent with the DSM-IV criteria to provide an accurate clinical assessment (Akincigil et al., 2010). It is possible there are differences between parents reporting depressive symptoms and those with clinically diagnosed depression.

1.4.3.4 Relationship measurement

The large variety of relationship measures and possible reasons for this has been discussed throughout the review. Again, these measures relied on self-reported data, often from the mother only. There is a possibility that reports of relationship quality may be influenced by depressive symptoms (Logsdon et al., 2000), as such gathering the perspectives of both members of the couple can be beneficial. Some studies including partners found consistency on measures of relationship factors (e.g. Salmela-Aro et al., 2006), whilst others found discrepancies between couples' perceptions (Kerstis et al., 2012). As previously stated, self-report bias may not be a significant concern as the participants' perception of the relationship is of interest, rather than objective measurement. Some studies did control for the effects of depression on reports of relationship quality, for example by sampling at several antenatal and postnatal time-points or by gathering data from multiple sources.

1.4.3.5 Methods and statistical analysis

All reviewed studies utilised observational methods which have notable limitations. In prospective cohort studies, high losses of participants at follow-up can impact on significance of findings and introduce sample bias. Retrospective cohort studies may be affected by less rigorous collection of data specific to the research aims, as well as increased likelihood of recall bias from participants. Few studies explicitly reported methodological considerations to address these potential sources of bias, affecting the perceived quality of the research. Many studies were limited by small samples and only five studies reported power calculations used to inform the sample size. As such, it is unclear whether most studies were sufficiently powered. Some findings may therefore be vulnerable to Type II statistical errors, where some significant

relationships between variables may have remained undetected. Only one study reported this as having a possible impact on their findings (Logsdon et al., 1994).

The majority of studies used cohort designs to investigate correlational relationships between variables, therefore direction of causation cannot be firmly concluded. However, they can offer firmer indications of cause and effect relationships than cross-sectional designs, due to measuring across different time points. Most studies statistically analysed data using regression analysis, in order to control for potential confounding variables as identified through existing literature. Despite this, the inability to fully control for all confounding variables within observational designs may impact on the strength of findings (Mann, 2003). Some studies used multilevel or structural equation modelling statistical methods to indicate the amount of variance accounted for by different variables (e.g. Whisman et al., 2011). These approaches also benefit from improved controlling of measurement errors and missing data.

1.5 Discussion

1.5.1 Summary and discussion of findings

The findings from the reviewed studies suggest the following relationship factors may be implicated in increased postnatal depressive symptoms: low emotional support, low satisfaction with support, unmet expectations of support, perception of a partner as uncaring or controlling, reduced relationship satisfaction or adjustment, traditional sex-role attitudes, and high levels of conflict or discord in the relationship.

Support was the most heavily researched relationship construct. Satisfaction with support appears to be more strongly negatively associated with depressive symptoms

than support quantity. This extends existing models of social support to include consideration of the accessibility and quality of support resources specific to the perinatal period (Cohen & Wills, 1985). It is likely women draw on different resources depending on the type of support they require. Partners are perhaps relied upon for more emotional support, whereas instrumental support may be better provided by parents (Haslam et al., 2006). However, the lack of measurement of support from wider social networks in these studies means this theory was not tested or confirmed.

Some studies extended this concept to suggest the relationship between support and maternal depression was moderated by several processes, such as a sense of parenting competence and support expectations. Gremigni et al. (2011) suggest this is consistent with the Social Expectations Model, whereby events turning out to be less positive or more negative than expected are strongly associated with depression (Levitt, Coffman, Guacci-Franco & Loveless, 2000). Unmet expectations of parenthood has previously been associated with increased likelihood of PND (Beck, 2002). It may be receiving less partner support than expected is part of a wider context of unmet expectations of parenthood.

Reduced relationship satisfaction and increased conflict in the postpartum period was consistently associated with increased depressive symptoms. The involvement of couples in some of these studies provided evidence of the shared and reciprocal relationships between depressive symptoms and satisfaction or conflict. Previous research suggests one member of a couple experiencing depression places additional strain on the relationship, which further maintains the depression (Davila et al., 1997; Wood et al., 1990). This idea of a bidirectional association between

relationship satisfaction and depression, across both members of the couple, is supported by the reviewed studies. The findings of these previous studies are extended in their application to depression in the postpartum period.

It is likely partner support, relationship satisfaction and conflict do not occur independently, with some or all influencing depressive symptoms concurrently as proposed by Stapleton et al. (2012). Cutrona, Russell and Gardener's (2005) Relationship Enhancement Model proposes relationship satisfaction is enhanced by both quantity and quality of partner support, which in turn improves wellbeing and reduces conflict. Don and Mickelson (2012) provided support for this model in finding maternal and paternal PND were indirectly associated with relationship satisfaction and support. However, further testing is required to strengthen support for the model's applicability to both maternal and paternal PND, given previous findings that associations between support and relationship satisfaction are different for women and men (Lawrence, Rothman, Cobb, Rothman & Bradbury, 2008).

1.5.2 Summary of methods and issues

The use of 'gold standard' randomised control studies is restricted in research of this nature by the ethical and practical difficulties of assigning participants to groups (Mann, 2003). All reviewed studies utilised observational research methods, as such findings may be subject to a number of sources of bias, and causal relationships between variables cannot be firmly established. The several retrospective studies may be compromised in that measures or follow-up time points were not designed with their particular aims in mind.

There are several additional limitations to the research reviewed. Firstly, participant samples were limited in their diversity, restricting the generalisability of findings.

This is perhaps due to the opportunistic sampling methods and recruitment sources used. Most studies recruited only female participants, thus only one perspective of the couple relationship was accounted for. Additionally, almost all studies used screening tools to measure depressive symptoms which did not provide a clinical diagnosis. As such, it is unclear how findings apply to those who meet diagnostic criteria for PND. All depression and relationship measures relied on self-report completion which can introduce bias. As discussed, reliability of reports is perhaps not significantly detrimental to this research. Furthermore, the inclusion of partners may have partially addressed this issue, as well as providing useful findings. Finally, some relationship variables, especially partner support, lacked clear operational definitions and validated measures. As such, there is likely to be some inconsistencies and overlap in findings across related constructs.

1.5.3 Review limitations

Several limitations can be identified within this systematic literature review. Firstly, the review was primarily conducted by a single researcher due to it being part of a fulfilment for an educational programme. Guidelines recommend the involvement of at least two researchers at various stages of systematic reviews, to improve reliability and reduce the possibility of bias (CRD, 2009). In efforts to reduce bias, data extraction and quality assessment tools were developed to standardise these processes across papers. Nevertheless, the reliability of findings may be compromised.

As previously described the review was designed to only focus on quantitative research, however this limits the type of findings critiqued. The inclusion of qualitative studies may have introduced a more descriptive and exploratory account

of the relationship between variables and experiences of relationships in the context of PND. Furthermore, whilst a decision was made to include only peer-reviewed reports, guidelines suggest the inclusion of research from a variety of sources to widen the scope of the review and reduce publication bias (CRD, 2009). The CRD also recommend papers should not be excluded on the basis of language. However a lack of translation resources meant only papers written in English were included.

Finally, the review aims and search terms were intentionally designed to be broad given the lack of previous reviews in this area. It may be argued this created a lack of specificity in the variables included, however this may reflect the nature of the research in this area.

1.5.4 Clinical implications

Improved knowledge of relationship factors associated with PND could inform the screening and identification of at-risk parents in both the antenatal and postnatal periods. Early identification of relationship difficulties may facilitate the provision of couple support or psychosocial interventions, to attempt to prevent the development of PND. Previous research has found partners often feel excluded during the pregnancy and birth (Fenwick, Bayes & Johansson, 2012). Research findings highlighting the impact of partner support could strengthen the argument for better involvement of partners in antenatal preparations, to improve support provision. Additionally, support for women in managing their expectations and sense of competence could be beneficial, given their potential moderating effect between relationship factors and PND (Fagan & Lee, 2010; Gremigni et al., 2011). The finding of similar links between relationship factors and PND for both women and

men, suggests a need to screen both members of the couple for PND when relationship difficulties are identified.

Whilst this review did not focus on relationship based interventions for PND, previous reviews have supported their use (Claridge, 2014; Miniati et al, 2014). The findings of this review could further strengthen the rationale for the provision of such interventions. The involvement of both members of the couple in interventions could be particularly important to enhance perceived quality of support and relationship adjustment.

1.5.5 Future research recommendations

Whilst the quality of the reviewed studies was generally good, the limitations discussed lead to several research recommendations. Firstly, research establishing causal relationships between relationship variables and PND is needed. This may be achieved through randomised control trials of interventions targeting the couple relationship, to establish direct effects of moderating relationship factors. More research involving couples is needed, given findings of similarities and differences between men's and women's experiences. Similarly, research into the efficacy of involving partners in psychosocial interventions has been limited, warranting further research (Brandon et al., 2012). Furthermore, research involving more diverse populations is required, including studies of couples in same sex relationships.

Future research may benefit from more consistent operational definitions of relationship variables and corresponding validated measures, particularly in the area of support. Additionally, research modelling the involvement of multiple relationship constructs in PND may be warranted, given the likely links between factors. Finally,

studies examining multiple sources of support provision may help to clarify the role of partner support in the context of the wider support network.

1.5.6 Conclusion

Depressive symptoms in the postpartum period appear to be associated with reduced satisfaction with partner support, relationship dissatisfaction and relationship conflict or stress. Findings highlighted similarities and differences between men's and women's experiences of the relationship and PND, however studies involving couples were scarce. Studies were subject to several limitations associated with the use of observational and retrospective designs, lack of diversity in participants and variance in definitions and measures of relationship factors. Findings have implications for PND screening and interventions for couples reporting relationship difficulties in the perinatal period.

1.6 References

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Chapter Two: Empirical Paper

**An exploration of men's experiences of having a partner admitted to
a Mother and Baby Unit for first episode postpartum psychosis.**

In preparation for submission to *Archives of Women's Mental Health*
(see Appendix A for Author Instructions)

Chapter word count (excluding title page, tables and references): 8090

2.1 Abstract

Purpose: Postpartum psychosis can be life-changing for women, however little is known about its impact on their partners. This study aimed to explore the experiences of men whose partner had been admitted to a Mother and Baby Unit for treatment of first episode postpartum psychosis.

Methods: Semi-structured interviews were conducted with seven participants. Transcripts were analysed using Interpretative Phenomenological Analysis (IPA).

Results: Two superordinate themes emerged: ‘What the f**k is going on?’ and ‘Time to figure out how your family works’. Partners experienced shock and confusion during the onset of postpartum psychosis. Most felt Mother and Baby Unit admission was beneficial to both them and their partner, although many faced barriers to accessing help and ongoing involvement in their partner’s care. A process of understanding changes to roles, relationships and family identity was described. Loss was a common experience, with a potentially lasting impact.

Conclusions: Men reported experiencing a range of emotions, confusion and change around their partner’s development and treatment of postpartum psychosis. Improvements are needed in awareness of postpartum psychosis, access to Mother and Baby Units, and services’ involvement and support of partners. Further research is needed to explore experiences of a wider range of mental health services.

Keywords: *postpartum psychosis, fathers, Mother and Baby Unit, Interpretative Phenomenological Analysis, perinatal mental health*

2.2 Introduction

2.2.1 Postpartum Psychosis

The perinatal period is a time of increased risk for women's mental health (National Institute for Health and Care Excellence [NICE], 2014). Estimates suggest one or two women per 1000 births will develop postpartum psychosis (PPP), which is described as the most severe postnatal mental health problem, and considered a psychiatric emergency (Kohl, 2004; NICE, 2014). PPP symptoms usually occur within two weeks of delivery, often appearing within the first three days after birth (Heron, Craddock & Jones, 2005; Higgins, 2012). Early symptoms include: restlessness, insomnia, exhaustion, irritability, rapid mood changes and excitement (Heron, McGuinness, Robertson-Blackmore, Craddock & Jones, 2008; Higgins, 2012). These can rapidly progress into symptoms characteristic of psychosis such as: disorganised behaviour, mood lability, hallucinations and delusions (Seyfried & Marcus, 2003). Confusion, disorientation and extreme emotional lability are more commonly observed than in other psychotic disorders (Higgins, 2012).

Understanding of the causes and risk factors of PPP remains limited (Higgins, 2012). Increased risk is associated with a personal or first degree family history of PPP or bipolar disorder (Heron et al., 2008). However, up to 50% of women have no history of psychiatric hospitalisation, with PPP being their first and only experience of mental health difficulties (Higgins, 2012; Valdimarsdottir, Hultman, Harlow, Cnattingius & Sparen, 2009). Whilst the prognosis for PPP is considered better than other psychoses, women report a life changing impact on their experience of motherhood, relationships and sense of self, leading to feelings of isolation, frustration and loss (Robertson & Lyons, 2003).

2.2.2 Management of Postpartum Psychosis

Early recognition and treatment of PPP is essential for more favourable long-term outcomes (Robertson & Lyons, 2003), as delays can result in longer, more severe and difficult to treat episodes (SIGN, 2002). For women experiencing PPP, the risks of suicide and causing accidental or intentional harm to their baby is increased with longer or more severe episodes (Bauer et al., 2014; Lewis, 2007).

Specialist multidisciplinary services are recommended for the management of perinatal mental health difficulties (Bauer et al., 2014; NICE, 2014). PPP often requires hospital admission due to its severity and associated risks, with specialist Mother and Baby Units (MBUs) preferred over general inpatient services (Higgins, 2012; Lewis, 2007). MBUs offer conjoint admission for the mother and baby up to one year of age. Potential benefits include; increased safety for both the mother and baby, staff assistance in child care, and improved mother-baby bonding (Friedman, 2010). High levels of patient satisfaction have been found for these units (Antonyamy, Wieck & Wittkowski, 2009; Neil, Sanderson & Wieck, 2005). However, research into outcomes and cost-effectiveness has shown mixed results regarding their benefits (Elkin et al., 2009; Friedman, 2010). Although specialist services are considered best practice, there is limited access to these services in some areas of the UK (Elkin et al., 2009; Maternal Mental Health Alliance, 2014). Additional barriers to accessing services may include stigma, fear of social services involvement and cultural differences (Gibson & Gray, 2012; Higgins, 2012).

Experiencing PPP can bring great uncertainty, with mothers expressing a need for informational support from health services about the condition, its treatment, signs of relapse and prognosis (Doucet, Letourneau & Robertson-Blackmore, 2012). Women

can feel isolated and access to peer support networks is considered helpful in their recovery (NICE, 2014). Additionally, guidelines acknowledge the importance of involving women's families, particularly the baby's father, in their care (Higgins, 2012; NICE, 2014).

2.2.3 Fathers' Experiences

Women's partners are valued by mental health professionals as 'co-workers' in facilitating recovery from perinatal mental health problems (Engqvist & Nilsson, 2013). Having a supportive partner has been associated with shorter admission duration for women requiring inpatient treatment for postpartum psychiatric difficulties (Grube, 2004). However, only a third of women experiencing perinatal mental health problems described their partner as supportive in the same study. For some mothers PPP is considered a factor in relationship breakdown (Robertson & Lyons, 2003).

In addition to their perceived role of supporting recovery from perinatal mental health problems, partners' experiences are likely to involve a number of other changes and stressors. Men may need to take on additional childcare responsibilities whilst their partner is unwell, which can have significant financial implications (Doucet et al., 2012). They are also required to adjust to understanding and caring for their partner (Engqvist & Nilsson, 2011). Partners of women with perinatal mental health problems can feel frustrated, angry, helpless, fearful, overwhelmed, isolated, confused and concerned for their partner and the future (Engqvist & Nilsson, 2011). These reactions may conflict with the expectations of a stereotypical 'male' role of being strong and contained.

There are two known published studies that have examined men's experiences of PPP specifically. Doucet et al. (2012) found like mothers, partners experienced great uncertainty around PPP, although they struggled to ask for support. However, all men's partners had been treated in US and Canadian general inpatient facilities whilst separated from their infants, restricting generalisability to UK practice. A recent UK study exploring the impact of PPP on couples' relationships found some relationships ultimately became stronger, despite some initial difficulties (Wyatt, Murray, Davies & Jomeen, 2015). However, men were interviewed alongside their partner in dyadic interviews, which may have affected the experiences disclosed. Additionally, MBU admission was not discussed. It remains unclear how fathers are affected by the severe and sudden nature of PPP, or by the separation from their partner and baby during MBU admission.

2.2.4 Summary and aims of the present investigation

Although there is increasing research into the causes, aetiology and women's experiences of PPP, there is very little research focused on their partners. Further understanding of fathers' experiences could help to improve their own wellbeing and to maintain their ability to support their partners (Grube, 2004).

The primary aim of the present study is to explore fathers' experiences of their partner developing a first episode PPP requiring admission to an MBU. Furthermore, the study will focus on men's experiences of fatherhood and relationships in this context.

2.3 Method

2.3.1 Design

Given the exploratory nature of the research aims, the study used qualitative methodology. As this aim focused on achieving an in-depth understanding of the unique experiences of fathers in this context, interpretative phenomenological analysis (IPA) was considered the most appropriate method of analysis (Smith, Flowers & Larkin, 2009). The double hermeneutic stance of IPA, in which the researcher takes a position of openly exploring and making sense of how people understand their experiences, seemed particularly relevant given the lack of research in this area (Smith, 2004).

2.3.2 Materials

A semi-structured interview schedule (Appendix G) was developed by the researcher. The schedule was reviewed by three research supervisors familiar with perinatal mental health, parenting and qualitative research methods. Questions were based on the research aims and themes from similar studies exploring parenting and experiences of PPP (Engqvist & Nilsson, 2011; Robertson & Lyons, 2003). The schedule was designed to allow participants to explore relevant and important experiences, through open-ended, non-directive questions in line with IPA epistemology (Smith et al., 2009; Willig, 2008).

2.3.3 Procedure

2.3.3.1 Ethics

Ethical approval was obtained from Coventry University (Appendix H), the National Research Ethics Service (NRES) Committee - West Midlands (Appendices I & J),

and the Research and Development Departments of Birmingham and Solihull Mental Health NHS Foundation Trust (Appendix K), and South Staffordshire and Shropshire NHS Foundation Trust (Appendix L).

Informed written consent was obtained using a Participant Information Sheet (Appendix M) and Consent Form (Appendix N) developed using NRES (2011) guidance. The British Psychological Society Code of Human Research Ethics (BPS, 2011) was adhered to.

2.3.3.2 Recruitment

Fathers were recruited whilst their partner and baby were receiving inpatient treatment at an MBU for their first episode of PPP. These inclusion criteria were set to establish a homogenous group, as required for IPA (Smith et al., 2009). As mothers remained under the care of the MBU it was deemed ethically and clinically necessary to seek their verbal consent to approach their partner. Fathers whose partner did not provide consent were not asked to take part. Fathers who did not speak English were excluded from the study, as it was felt this would impact on the sample's homogeneity in addition to a lack of translation resources.

Fathers meeting the inclusion criteria were identified by ward staff on two MBUs, through their routine clinical care. The study was also advertised using posters displayed in patient areas (Appendix O). The MBU clinical team determined the appropriateness of approaching potential participants. It was considered inappropriate to recruit potential participants if the mother lacked capacity to give verbal consent or if either person was experiencing acute distress. On obtaining consent from their partner, MBU staff gave fathers the Participant Information Sheet

to describe the purpose of the research, the research procedure and ethical considerations. Participants provided verbal consent for the researcher to contact them to discuss more detailed information about the study.

Seventeen potential participants were identified in the recruitment period. Three did not meet inclusion criteria; one due to the mother experiencing her second episode of PPP and two did not speak any English. A further three were not approached as one was in prison, one presented concerns around risk, and one whose partner was discharged to a different NHS trust. One potential participant's partner did not provide consent, due to persistent paranoid thoughts. Three men declined to take part; one as he did not wish to talk about his experiences and two did not provide a reason. Seven participants were recruited in total (see section 2.3.4).

2.3.3.3 Interviews

Semi-structured, individual interviews were conducted by the researcher between August 2014 and March 2015. Private clinic rooms at the MBUs involved were used, as this provided a familiar and accessible setting for participants. Participants were requested to provide written consent (Appendix N) and demographic information (Appendix P) prior to the interview. Interviews lasted between 40 and 84 minutes (average 60 minutes). The interviews were digitally recorded and participants were informed that identifying information would be removed in the verbatim transcription. Participants received debriefing information at the end of the interview (Appendix Q), and were made aware of available support from unit staff or external organisations in case of any concerns or distress raised.

2.3.4 Participants

All seven participants' partners were awaiting imminent discharge following some periods of home leave. The participants' mean age was 31.3 years (range: 23-42 years). Further demographic information is presented in Table 1. To preserve anonymity, the participants' names have been changed.

Table 1: Demographic information of participants

Pseudonym	Age	Ethnicity	Education level & occupation	Total children	Relationship status	Own mental health history
Ashley	23	Mixed race	Undergraduate degree Employed – professionally trained	1	Married/engaged	None
Tim	31	White British	Undergraduate degree Employed – no professional training	1	Other	None
James	27	White British	Undergraduate degree Employed – no professional training	1	Married/engaged	None
David	42	White British	A-levels Employed – professionally trained	1	Married/engaged	None
Matthew	28	White British	Postgraduate qualification Employed – professionally trained	1	Married/engaged	Yes, treated in primary care
Sam	32	Black/African/Caribbean/Black British	Undergraduate degree Unemployed	3	Cohabiting (not married or engaged)	None
Michael	36	White British	Undergraduate degree Employed – professionally trained	1	Married/engaged	None

2.3.5 Analysis

2.3.5.1 Procedure

An IPA framework was used to analyse the transcripts, guided by steps proposed by Smith et al. (2009) (see Table 2).

Table 2: Analytical stages of IPA (Smith et al., 2009)

Stages of Analysis	
1	Reading and Re-reading: Transcripts read several times, once alongside the audio recording.
2	Initial noting: Exploratory notes regarding semantic content and language.
3	Developing emergent themes: Using initial notes to map connections between exploratory comments.
4	Connecting emergent themes: Organising themes and identifying connections, producing superordinate themes.
5	Analysing the next case: Above processes repeated with next participant's transcript.
6	Finding patterns across cases: Identifying connections of themes between cases.

For each participant, reading and re-reading of the transcript was followed by the recording of exploratory notes and emerging themes in separate columns adjacent to the transcript (example in Appendix R). The identified themes were organised to find connecting themes. This process was repeated for each case, before connections in superordinate themes were found across all of the cases.

2.3.5.2 Validity

Guidelines for standards of qualitative research recommend 'credibility checks' of analysis (Elliot, Fischer & Rennie, 1999). Extracts of a transcript were coded by a colleague in order to compare themes with those identified by the researcher.

Additionally, the coding process and themes were discussed in research supervision.

An audit trail of written and recorded materials was maintained to facilitate checking, transparency and validity (Shinebourne, 2011; Smith et al., 2009). To

maintain a reflexive stance recommended for qualitative methods, a journal was kept to note the researcher's reflections (Yardley, 2000). Additionally, the researcher engaged in a bracketing interview to identify and 'bracket' potential biases. Both activities encouraged reflexivity and objectivity in the conduct and analysis of interviews (Ahern, 1999; Rolls & Relf, 2006).

2.3.5.3 Position of the Researcher

This study was completed as part of the researcher's role as a Trainee Clinical Psychologist in a local NHS trust. The researcher had previously worked at one of the recruiting MBUs and had prior understanding of the unit's approach and the staff team. At the time of the study, the researcher was interested in systemic models and the involvement of carers and families in clinical practice. Preconceptions identified in the bracketing interview included an assumption fathers would be distressed by being separated from their child, and that it would be their partner's first experience of a mental health problem.

2.4 Results

Participants' stories reflected the natural uncertainty surrounding the birth of a child, significantly amplified by the additional, often unexpected arrival of a severe mental health problem. There were two key themes identified within these experiences: 1) 'What the f**k is going on?' and 2) 'Time to figure out how your family works'.

Table 3: Super and sub-ordinate themes

Superordinate theme	Subordinate theme
1. What the f**k is going on?	1. PPP as an unexpected arrival 2. Not feeling heard
2. Time to figure out how your family works	1. Holding the fort 2. Loss and reconnection 3. Adjusting to family life

2.4.1 Super-ordinate theme 1: ‘What the fk is going on?’**

‘What the f**k is going on?’ is a quote capturing the lack of understanding experienced by participants during the onset and treatment of postpartum psychosis. Two subordinate themes were identified: 1) PPP as an unexpected arrival and 2) Not feeling heard.

2.4.1.1 Subordinate theme 1: PPP as an unexpected arrival

For most participants their partner’s PPP was their first direct experience of a mental health difficulty. During the early stages of PPP onset, participants reported going through a process of trying to make sense of the changes they were observing in their partner’s behaviour.

I kind of didn’t really see the more acute signs because A. I’m not experienced in them and B. I mean, I knew there was something up but I put it down to her being absolutely over exhausted. (James)

Like James, other participants largely attributed these changes to their partner recently becoming a new mother rather than a mental health problem. For all participants, it was their first child with their partner (one father’s partner had two children from a previous relationship). Many described not knowing what is normal

for a new mother and initially understood changes in the context of their partner's usual personality.

I couldn't understand it, really, but I had nothing to compare it with, so I just thought oh, is it just hormones and things after having the baby and it'll settle down. But maybe somewhere in the back of my mind I knew something wasn't quite right.
(Michael)

A range of emotions were expressed by participants as they talked about the progression towards more acute signs of PPP. Participants often identified a key moment they realised something was wrong, some describing it as 'traumatic'. This was accompanied by shock, confusion, embarrassment or fear, perhaps due to having missed or minimised earlier signs as normal.

She was ranting and raving and my friends.... They just both looked at me and I was like, 'what the fuck is going on?' (Tim)

When we went to the GP she was saying words...effectively playing word association on her own, flicking switches on and off, and it was just very, very uncomfortable I suppose, the whole time. (Matthew)

Seeking help for their partner sometimes created more uncertainty due to health professionals' limited awareness of PPP. In Matthew's case the GP diagnosed his partner with postnatal depression, despite Matthew disagreeing with this view. Other mothers were diagnosed with PPP more quickly but participants continued to feel confused and worried, due to not understanding the diagnosis.

The midwife said to me, 'I think it could be this thing called postpartum psychosis'. Which at the time, if I remember rightly, I didn't even hear the postpartum whatever

it was, it was just psychosis. You know, so I didn't even relate to any giving birth sort of thing. It was just, my wife's gone psychotic. (David)

If (the illness) can take over you, it means that you're not here, but you are here, so, it doesn't make any sense. (Ashley)

In response to this uncertainty, most participants started seeking more information about PPP. Some drew on resources such as internet websites and forums, others connected with family who worked in health services. Having a name for their partner's difficulties often provided some understanding and hope of recovery. There was sometimes an underlying sense of embarrassment or stigma, as illustrated by Sam's and James' quotes below.

I just went to check on google and search...her situation, and asking people like if they had something similar...and they keep telling me like, yeah, it happens, it's normal. In our community...they don't have that much experience with that situation of illness because....in our country we don't know about this mental health. (Sam)

No one really else knows...quite a few people know she's gone back into hospital because she's, um, what we've told them is getting over her caesarean and also over exhaustion. (James)

There was a sense of participants trying to understand why this had happened to them, by retrospectively identifying potential causes or reasons for the PPP. For some, this proved helpful in establishing some control and predictability for the future. Alternatively, it could lead to a more unhelpful dissection of events resulting in 'what if' questioning or blaming themselves and others for not helping enough.

I suppose my hope is that, that [difficult birth] caused it, because it's something that she, you know, it's not going to happen every day. She's not going to be walking

down the street and it happens. If there was an actual reason for it happening, that's my hope. (Michael)

Several participants described the benefits of the experience for developing their own understanding of mental health difficulties. In contrast to James' position, David hoped he could use this to begin increasing wider awareness of PPP. This was perhaps a way of finding positivity or control from an otherwise difficult experience.

I think talking about it is better than just pretending it hasn't happened to you. You know, my partner is quite willing.... to say to people, 'look, this is what could happen afterwards' ... what people need to look out for... I'm a great believer in that people need to shout about things to get people to listen, you know. It can't just be... letting people just get it and we'll deal with it. (David)

2.4.1.2 Subordinate theme 2: Not feeling heard

In trying to make sense of their partner's experience of PPP, all participants sought involvement in the care offered by health services and the MBU. However, a common experience was one of not feeling heard or valued by health professionals. From their first contact with services some participants felt their concerns were not taken seriously.

They [A&E staff] said, she's happy to go back to home, that was really difficult for me to accept because I said... she's not feeling well... They said if she's happy to go home... they can't do nothing. (Sam)

[NHS 111 helpline] could hear her screaming, they could hear the ruckus... And ur, they were asking me things like what's her blood pressure like and stuff and I'm like, 'look, you need to send somebody out now'. 'We can't do that yet, we need to go through these questions', 'Can, can you not hear her?'. (James)

In contrast to these experiences, some participants did not recognise a need for admission. In both cases, a lack of involvement in decisions led to some participants expressing frustration and anger with services. This was perhaps a result of feeling they had no understanding, control or power over what happened to their partner or baby, as discussed in the previous theme. A key theme in both Tim's and Ashley's stories was one of being excluded during the process of their partner's admission.

I couldn't do anything about it. So I just had to get over it... I said, 'why are we here? What's the point?' and... they just said, 'because we think it's worse than it is'... I tried to explain to them but obviously, I don't think they all get it... You're trying to say, 'come on what about? Oh ok, she might need to be here, but what about blah blah blah?', 'no, no, no she needs to be here'.... They don't... want a debate about it. (Ashley)

Because we weren't married... for the first five days, all I got was, 'you're not married, your son's not registered, you've got no right to know where they are or what's going on'. And that's all I got, from everybody. So all I knew was, my son had disappeared, my girlfriend had disappeared, she'd had problems in hospital... (Tim)

Several participants expressed frustration with being told they could not have information due to patient confidentiality prior to and during MBU admission. For others, the lack of information was viewed more as an oversight by staff. The implication was their involvement was not considered important, as the priority was on caring for their partner. Involvement seemed key for participants to understand their partner's situation; several noted appreciation when this was done well.

Confidentiality, really, should be an afterthought, when it comes to somebody that's got this kind of illness. You know, I've got enough stress and things to think about as

it is, without also having to chase up the staff... Not just to ask them stuff, also to give them feedback and my observations... They eventually start taking that feedback on board, which is good... I like the fact that it's a two way thing. (James)

(On general inpatient ward) They wouldn't really give me any information. They wouldn't talk to me and they weren't very approachable, sort of kept themselves at a distance and most of them didn't even know what was going on.... Here [on MBU], totally different story. Everybody knew what was going on. (Matthew)

Whilst some actively sought out information, others were uncomfortable in questioning professionals who they perhaps perceived to be in a more powerful position, despite feeling they could contribute to discussions.

I think I might have got on the doctor's nerves a little bit. Because [the doctor] was sort of like, 'well, this is about me and your partner', but obviously [my partner]... might not even think of the questions that I think of (David)

2.4.1.3 Summary of super-ordinate theme 1

A challenge for participants was a lack of understanding about PPP, or mental health in general. Most participants went through a process of missing early signs of PPP, recognising more acute signs, trying to access appropriate care for their partner, then seeking to improve their own understanding. Many participants faced barriers in their engagement with health services. Lack of awareness of PPP in health professionals, feeling dismissed, and having limited opportunities for involvement in their partner's mental health care before and during MBU admission were common difficulties. Frustration and anger were frequently expressed, perhaps in response to deeper experiences of powerlessness, helplessness, loss of control, fear and embarrassment.

2.4.2 Super-ordinate theme 2: ‘Time to figure out how your family works’

‘Time to figure out how your family works’ reflects the impact of PPP on the participants’ roles, relationships and identity within the family. Again, the experience of PPP involved changes well beyond what was expected when having a baby. Three subordinate themes were identified: 1) ‘Holding the fort’, 2) Loss and reconnection and 3) Adjusting to family life.

2.4.2.1 Subordinate theme 1: ‘Holding the fort’

Like most new fathers, many participants began to occupy a role of providing and caring for their family during the pregnancy. As their partners’ symptoms of PPP progressed, most described an increased sense of responsibility to care. The unpredictable and sometimes frightening nature of PPP led to most participants feeling instinctively protective of their baby. There was a sense of participants needing to split their attention between their partner and baby, and the demanding nature of this.

She picked up the baby in quite a... I wouldn't say aggressive manner, but not in a soft manner, you know, just sort of imagine in between that. And I was like, 'what are you doing?' ... So um I, at that point I took her off her and I felt a little bit uneasy to... leave the baby alone. So I just kept hold of her and then I phoned my mum and said, 'Can you come over? Obviously, we really need you here.' (David)

Several participants’ partners were not admitted to an MBU immediately, often due to lack of local MBU availability. Some participants were required to look after the baby alone whilst their partner was admitted to a general inpatient ward. Some

welcomed this role, suggesting it was their duty to care for their family. In Sam's case, he saw this as an opportunity for personal and relationship growth.

She was in a really bad situation, so I said I have to do this for her and to be able to show her how good I am, to look after the children and she, I want to see her... recover what she'd been doing on herself as well. So, she's happy now because, I could be asked to be that person for that time. (Sam)

Most participants felt unable to meet these demands on their own and drew on the help of family or friends. All expressed gratitude for this and a sentiment of 'I could not have done it without them'. This need for support perhaps reflects the pressure participants felt in protecting their family. Many participants spoke in a way that suggested they had reached their personal limits in their ability to cope; MBU admission was usually welcomed and provided relief. Most participants seemed to believe they had done their best and admission gave them permission to focus on looking after themselves. Most participants viewed this space to recover as enabling them to provide better quality care to their family.

I didn't feel um, that I was just abandoning her or leaving her... We were doing the right thing... It was a relief that somebody else was going to look after her and the medication and things, at least for a little bit.... I could come in, give her... all my attention for... a few hours in the morning, a few in the afternoon, a few in the night. Um, and I knew the baby was being taken care of. But then I'd go back and have time as well to sort of recharge my batteries. (Michael)

[When partner was on general adult ward] I was just travelling around... the county for about two weeks pretty much non-stop. So when they came here, where we live round the corner, and she could have the baby all day and I could go to work and I could think about other things, it was actually really, really helpful. (Matthew)

Many participants considered MBU staff as the most appropriate professionals to care for their family and valued their expertise; some reflecting on the opportunity to learn more about parenting from them. However for others, handing over caring responsibility provoked more negative feelings. Whilst some were concerned about being perceived as abandoning their family, others alluded to a power dynamic between themselves and staff in which they had lost some control over their role.

It's like, he's crying... and they're just sitting there talking... when they're doing the level five (observation of baby)... and I just walked up and went, 'excuse me'. I pick him up and just walk and they're just like, 'but he's on level...' and I just said, 'I'm taking this level five'. (Tim)

2.4.2.2 Subordinate theme 2: Loss and reconnection

In addition to a literal separation from their partner, most participants reflected on the psychological loss they felt in their relationship. Some alluded to feeling alone in their experience of PPP, like a bystander watching their partner become more unwell. Several participants described a process in which the shared experience of starting a family with their partner had seen them take different paths and have different perspectives.

I suppose I felt a bit like... there's nothing I can do for her, all I can do is go and visit for my own benefit not for hers. Um, say hello and just leave her to it really. So I suppose initially I didn't feel like a partner at all... I don't think she understood at first how beneficial it was being here... but that's just because she was confused. (Matthew)

There was a strong sense of their partner's identity or personality being changed by the PPP. Some participants coped with this by rationalising PPP as an external force which had temporarily taken over their partner. This separation of their partner and PPP perhaps protected against a fear that a part of their partner was permanently changed or lost.

I know that, that's not her. She's this lovely girl that I fell in love with, you know... the symptoms and stuff are not characteristic of her. And I, I identify that and I think, illness. (James)

It was somebody else in her body I suppose, that's the only way of putting it. Um, and it wasn't a normal person either (laughs)... It was like dealing with a malfunctioning robot effectively. (Matthew)

Some participants appeared to view their partner and PPP as more interlinked. This resulted in some difficult emotions: Ashley in particular spoke about a strong sense he had lost the person he had fallen in love with and appeared to go through a grieving process. Similarly, David expressed concerns his partner was permanently lost to the illness.

Obviously I knew that she was here but I thought her personality was dead, so my relationship with her personality is dead. Because even though she looks the same, if she's not her, I don't care about what you look like, she could look like anything, that doesn't matter, but I have a relationship with her personality. And my personality clicks with her personality, yeah, and if she's not there... our relationship isn't there. So... it felt like she was dead. So when I was at home I felt like I was single. I felt like I'd lost everything, so I was on my own again. Not again, they haven't been away for very long. But, you get the point. (Ashley)

My whole mind was just racing to think, she'd gone, you know... she'd gone crazy, really. And is that going to be her now for the rest of her life, you know, is she just going to be, you know, crazy, and not being able to look after her daughter. I just felt like I, at that point, I'd lost her. (David)

In most cases, loss was not felt as strongly in relation to their child. Some participants attributed this to having not yet formed a strong attachment, as their child was still very young. In cases such as James, who felt he had become more attached, the separation was more challenging.

It was very difficult... I'd come to know his little quirks and his little ways and stuff, I mean. Although my partner might know as well, those, you know. It's more that, the staff probably don't. Um, and I'm leaving him... in a different county, you know, it's leaving them both in a different county. (James)

For many participants, the relationship with their baby was viewed as positive and helpful. This relationship perhaps offered something more stable and unaffected by PPP, whilst maintaining an implicit connection with their partner. Tim told a story of the joy he felt with his son despite being repeatedly 'pooed on', which could be extended as a metaphor for many of the other participants' experiences.

I had poo on one hand, poo on the other hand... his feet went into the poo. What did he do next? Kicked me straight in the face! So I had poo on my chin, poo on my nose, poo on both my hands and I'm like, 'he won't stop pooing, it's everywhere!' (laughs)... He just started laughing at me... But it's just little things... at the time it can be like stressful and what have you but... it makes you laugh so much, I love being father. (Tim)

Most participants described a process of reconnecting and 'getting their partner back' as they started to recover. Participants reported a mixture of views on the long-

term impact of the experience on their relationship. Some described feeling closer in their relationship as a result of working through the experience together. Others reflected on a loss of trust of their partner, perhaps related to events whilst their partner was unwell.

I guess there is a level of trust that kind of needs to be rebuilt on my part as well, just, with how she is around the baby, how she deals the baby... I mean, um, I'm very much a kind of person who's very protective and will sometimes, without realising, take over. (James)

Many participants envisaged future losses for their families, holding strong opinions of not wanting more children, rationalised as 'not being worth the risk'. Despite the pragmatism and sense of detachment from this life-changing decision, for many there was an underlying sense of sadness or disappointment.

It's just not, worth, um, the risk to, you know, to my partner. And obviously the baby would be there as well, so, I, but, you know, you never know... That's... one of my concerns... she might never have a brother or sister. I had a brother, well I've got a brother. And he's my best mate, we grew up together, and my child won't have that, and that's, I feel, guilty about that, for her. But, but I um, I just don't think, well, at this point in time anyway but, that it would be an option really. (Michael)

2.4.2.4 Subordinate theme 3: Adjusting to family life

Most participants viewed the experience of PPP as having interfered or delayed their adjustment to being a family. This disruption was sometimes reinforced by large distances between home and the MBU. In addition to the financial and practical implications of travelling, many participants literally left part of their lives behind.

Many reflected on the loss of opportunity to do normal activities with their baby and there was a sense of disappointment for their unmet expectations of parenthood.

You feel like, a bit deflated.... Because you know, you've got two weeks off from work say, you have all these plans to do these great things and bed down and suddenly that two weeks is gone. Because you're in hospital. And then you sort of feel like, you need to go back to work but we haven't had time to sort of bond at home. (David)

Several participants discussed difficulties parenting the way they wanted to in the MBU environment; whilst some saw an opportunity to learn from staff, many noted they felt they were being watched. Some experienced this as uncomfortable or embarrassing, whereas others felt their parenting was being scrutinised or criticised.

You do the smallest thing and, 'oh no, you're doing it wrong'. Let her get on with it. Ok, it might not be your way but if each of your people and us have different ways of doing it, it doesn't mean we're wrong it just means it's different. (Ashley)

Others described more positive experiences of feeling they were given autonomy and responsibility of their child when they visited.

When I came in late... (staff would) go away then and let me, sort of just, then you'd have a bit of time on your own. I think that was just, important. (Michael)

Whilst all of the participants' partners had been allowed home leave, they had not yet been discharged. Some viewed their partner's recovery tentatively and described apprehension about how their family would be when they returned home. For some, there was an implicit sense of resentment that their future could be very different to what they had imagined.

I don't want to say it's made us grow up... but I suppose it has... It's made us, um, become my parents, I guess... Just, it's a different life to the one we'd sort of planned, even while she was pregnant. But, things have changed, so, um, we adapt.
(Matthew)

However, other were more accepting of the changes resulting from PPP.

Before when she had a baby... we were expecting to be able to get together, to make a proper family. We were on that plan, but this makes more the plan, to be able to decide quickly rather than more waiting in the future. (Sam)

Others described their family as being 'back to normal', seemingly wanting to move forwards and leave this experience behind them. It is possible these participants were more detached from the experience and had not yet integrated it fully into their lives. This perhaps facilitated a sense of hope and protected them from painful feelings.

It feels like a certain part didn't exist, never happened. Feels like that. When my partner was over on the weekend, it just feels like, we've gone back two months. Cut out this part and everything's gone back to normal... It's relief. (Ashley)

2.4.2.4 Summary of super-ordinate theme 2

The birth of a new baby inevitably brings changes to roles and relationships within the family unit, however the experience of PPP seemed to amplify this process. Participants reported a heightened sense of responsibility to care for their family, which challenged their capacity to cope. MBU admission was often perceived as a helpful relief of responsibility. Some participants described painful feelings of loss for their partner but less so with their child. PPP was perceived as delaying the

process of adjusting to family life, as well as impacting on plans for future children. Forming a family identity was often challenging in the MBU environment.

2.5 Discussion

This study aimed to explore the experiences of men whose partner had been admitted to an MBU for first episode PPP. It was hoped the study would allow fathers to have a voice in a previously neglected area of research. Two main themes were identified in the analysis, which will be explored in relation to existing literature. Study limitations, clinical implications and future research recommendations will also be considered.

2.5.1 Exploration of themes

‘What the f**k is going on?’ captures the great uncertainty and confusion surrounding the development of PPP and MBU admission experienced by all participants. The lack of awareness of PPP for participants, their families and the healthcare professionals they encountered is consistent with previous research (Doucet et al., 2012). The lack of information available about PPP hindered participants’ ability to support their partners and improve their own understanding, increasing their frustration.

The lack of involvement in their partner’s care was a source of concern and anger for most participants. This may be reflective of a wider picture of men feeling excluded during their partner’s perinatal healthcare (Fenwick, Bayes & Johansson, 2012; Shirani, Henwood & Coltart, 2009). However, this situation somewhat differed as participants had adopted an additional ‘carer’ role, as highlighted in the subordinate theme ‘Holding the fort’. It is possible this new role made the lack of involvement in

services more pertinent and emotionally demanding. Whilst most participants viewed this role as temporary, their feelings of exclusion from health services closely reflects the experiences of long-term carers of people accessing mental health services (Rowe, 2012). Whilst anger was primarily expressed towards services, it is possible participants were also feeling powerless and out of control in caring for their loved ones (Wilkinson & McAndrew, 2008). Additionally, there may have an implicit anger towards their partner for 'leaving' them whilst unwell and their loss of an intimate relationship, which could be much harder to express (Jones, 2001; Wyatt et al., 2015).

Many participants acknowledged positive aspects of their partner's MBU admission. Most expressed appreciation for the specialist knowledge of staff and felt reassured by the care provided to their family. For participants whose partner was initially admitted to a general mental health ward, there was a strong feeling these services were not appropriate for their needs. This mirrors previous research with women, who viewed PPP as different to other mental health difficulties and felt safer on an MBU (Antonyamy et al., 2009; Robertson & Lyons, 2003). Participants appeared to accept long distances to the MBU as 'worth it' for their partner to receive the most appropriate care. Despite this, many of the emotions experienced reflected those of fathers whose partner was not treated on an MBU (Doucet et al., 2012; Engvist & Nilsson, 2011). This perhaps suggests the fundamentally distressing nature of the experience is not fully compensated for by perceived good care of their family.

As explored throughout the superordinate theme 'Time to figure out how your family works', most participants were still making sense of the impact of PPP on themselves, their relationships, the structure of their family and the future. A unique

aspect of this study is participants' partners remained under the care of an MBU; so the experience and associated emotions were still current. Much of the ongoing confusion regarding the roles, responsibilities and identities of themselves, their partner and their family may mirror common processes in many new parents and those experiencing other perinatal mental health difficulties (Beck, 2002).

The deep sense of loss for participants, explored in the subordinate theme 'Loss and reconnection', was consistent with previous studies (Doucet et al., 2012; Wyatt et al., 2015). In contrast to this previous research, many participants had not yet experienced full recovery or post-traumatic growth in their spousal relationship (Wyatt et al., 2015). This likely reflects the timing of the study and the ongoing nature of participants' experiences. Less intense feelings of loss for their baby was attributed to having not yet formed a strong attachment, perhaps reflecting men's perceptions that it takes them longer to bond with infants (Goodman, 2005). However, men's relationships with their baby seemed to provide a source of stability and purity, as something unaffected by the experience of PPP.

2.5.2 Limitations

The primary limitation of the study is the homogeneous participant group required for IPA methodology, resulting in limited generalisability of findings. The sample was limited in that almost all of the participants only had one child, perhaps reflecting the inclusion criteria of first episode PPP. Whilst this elicited findings of participants feeling unprepared, families with multiple children may experience different demands. Additionally, participants lacked diversity, being mostly white, educated professionals. This may have been partially due to the exclusion of non-English speaking participants, which may have limited the range of experiences

explored. It was noted the participants did not reflect the usual demographic spread of patients on the involved MBUs, however demographic information for non-participants was not available to compare the groups.

Secondly, whilst participants lived across the UK, recruitment focused on two MBUs within a specific area. Experiences may differ for families who live across different areas of the country, depending on their access to services. Finally, recruitment focussed on men whose partners were still receiving care for PPP, as such the long-term impact cannot be established from this study.

2.5.3 Clinical implications

Despite increasing acknowledgement of the importance of good perinatal mental health care, there are several areas in which services could improve the care of women and their partners. Firstly, on a public health level, awareness of perinatal mental health and PPP specifically continues to be lacking for both professionals and parents. Greater awareness of the symptoms of PPP would facilitate the early detection and intervention which enables effective recovery. Additionally, improved awareness may alleviate some of the feelings of stigma and loss experienced by some participants. The work of organisations such as Action for Postpartum Psychosis may contribute towards this awareness improvement, as well as recent calls to improve perinatal mental health care (Bauer et al., 2014). Limited understanding and access to information could be an even more pertinent issue for those from different cultures, as suggested in Sam's experience (page 79).

Secondly, whilst research has suggested health professionals value women's partners as co-workers in perinatal mental health treatment; this did not seem to be a common experience for this study's participants. The reasons for lack of collaboration are

unclear; it is possible staff's perceived lack of time or concerns around confidentiality are barriers (Rowe, 2012). Improved engagement of fathers at all service levels may help relieve feelings of anger, frustration and powerlessness. Within MBUs engagement with fathers in regards to parenting may improve the difficulties faced in connecting with their families in this environment. Both MBUs involved in this study offered separate support for fathers; of which the ongoing provision, evaluation and revision would be beneficial. However, in this study it was apparent some participants may have coped by detaching and denying any need for support. The timing of support offered to fathers should be considered on an individual basis and perhaps re-offered later if it is initially refused. It may be that some fathers do not require any support; whilst others may benefit from knowing about resources available after discharge should difficulties occur in the future. The exclusion of non-English speakers means their experiences of collaboration with services were not explored. However, a language barrier and need for interpreters may introduce additional difficulties for this group.

Finally, MBU admission is considered best practice for management of PPP and participants largely valued their care. However, the lack of MBU availability across the UK created problems for many participants in regards to travel, finances, separation from their family and delayed admission. Inappropriately treated perinatal mental health problems have consequences for mothers' and children's health and development, which incurs costs to the public sector (Bauer et al., 2014). As such, improved access to specialist services would not only help families but also the impact on the economy.

2.5.4 Future research recommendations

Given the lack of current research in this area, there are several possible areas for future studies. Firstly, more longitudinal research may be justified to clarify the long-term impact of PPP for men, particularly given the life changing effects identified in research with women. Secondly, research involving men whose partners were treated for PPP in settings other than an MBU is needed, given the present study highlighted difficulties in using community or general mental health services. Thirdly, research using more ethnically and socially diverse participants may be beneficial, in addition to research involving men with multiple children.

2.5.5 Conclusion

This study sought to explore men's experiences of having a partner admitted to an MBU for PPP. Two main themes were identified in the interpretative phenomenological analysis of transcripts. The first focused on participants not knowing what was happening regarding their partner's mental health and care, the second on participants making sense of changes to their role, relationships and identity within the family. Some of these processes may be shared more widely both with new parents and carers of people with other mental health difficulties. Clinical implications of findings include the need for improved awareness of perinatal mental health problems, increased collaborative working with fathers, consideration of the timing of support offered to fathers, and improved provision of specialist perinatal mental health services. Future research may seek to address limitations of this study by broadening the scope of qualitative research, to consider a wider range of services accessed and more diverse participants.

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Chapter Three: Reflective Paper

Having a voice: Reflections on listening to men's experiences of postpartum psychosis

In preparation for submission to *Reflective Practice* (see Appendix S for author instructions)

Chapter word count (excluding title page and references): 3314

3.1 Introduction

This thesis has focussed on the important role men can play in women's perinatal mental health. Previous research has largely neglected to understand men's perinatal experiences in their own right, independent of their partners' needs. In exploring fathers' experiences of having a partner develop postpartum psychosis (PPP), it was hoped the empirical study could give men a voice of their own. This paper will explore some of my reflections on the impact of listening to these men's stories and on the research process.

The paper will begin by discussing how my clinical experiences prior to training motivated me to conduct this piece of research. It will go on to consider the process of recruiting fathers for the study and what they used the interview space to communicate. A theme running throughout the study findings was one of not being heard by services and, to some degree, their own partners. It is this that provoked the strongest emotional reactions for me during the research process, leading to the focus of this paper. There are many possible reasons why fathers' experiences are less recognised in perinatal healthcare. The personal and professional challenges of truly listening to some men's painful and emotional stories will be explored.

Finally, I will consider the impact the research process has had on me personally and the ways in which this research could influence my future clinical practice. Through thinking about these men's experiences, I have been encouraged to use my own voice as a clinical psychologist, researcher and a person, to advocate for the things I believe to be important.

3.2 Why give fathers a voice?

My interest in including fathers in perinatal mental healthcare began whilst working on a Mother and Baby Unit (MBU) prior to clinical training. During this time I was involved in setting up partner support sessions, which I felt proud and enthused to be a part of. For me, involvement of fathers seemed like ‘common sense’. I was curious about the principle of MBU’s being built on the foundational belief that a baby was better off with its mother, even if the mother was severely mentally unwell. I wondered what this assumption may feel like for fathers, particularly in a time of changing culture where men are having a greater role in childcare than previous generations (Atkinson, 2012). This prompted my choice of topic for the empirical study: I wanted to find out what was happening for men both in and outside the MBU environment. I found myself instinctively leaning towards Interpretative Phenomenological Analysis (IPA) methodology to achieve this, as my clinical and research interests focus on understanding peoples’ individual experiences.

Perhaps understandably, the vast majority of perinatal health research and clinical practice is focussed on the wellbeing of the mother and baby. Whilst men are increasingly included in research and clinical care, it is often in their capacity as a partner to the mother, rather than as a person in their own right (Deave & Johnson, 2008). Indeed, part of the rationale for my own study was that improved understanding of men’s experiences could enable them to provide better quality support to their partners. Whilst new studies examining father’s experiences of PPP were published during the course of my research, men were recruited or interviewed alongside their partners rather than having their own space in the research. In recruiting male only participants for my study, I feel this created a more open space

for men to discuss their experiences. It became clear these fathers went through an emotional journey that, at times, was quite different from their partner's; they had their own story to tell and needs that were not always directly associated with their role as a partner.

3.3 Giving fathers a voice

3.3.1 Recruitment

From the initial planning stages and throughout the recruitment period, my supervisors and I remained concerned as to whether enough men would agree to participate. An additional recruitment centre was added in addition to several contingency plans for extending the pool of potential participants. Whilst part of this anxiety was due to the sampling population being limited by the rarity of PPP, in retrospect I wonder whether I had bought into an assumption that men would not be willing to take part in psychological research. This has been observed in previous studies of men's perinatal experiences and it is possible this challenge prevents researchers from approaching this area (Ramchandani & Psychogiou, 2009). I was happy to be proved wrong in this case; most of the men who were eligible for the study were unexpectedly keen to take part. I was humbled by how generous and accommodating participants were with their time, despite me seemingly not being able to offer them anything in return. The reason many participants gave for taking part was a wish to help other men in their situation, by improving services' approaches to engagement with fathers. Many had experienced feelings of confusion, isolation and powerlessness; they wanted to somehow connect with other fathers and have their voice make a difference.

3.3.2 Experiences of the interviews

I was struck with the level of emotion expressed by the men who took part. Although many spoke in a pragmatic way, it was not difficult to identify how they were feeling underneath this. For me, Tim and Michael in particular stood out as representing the range of emotions they experienced and the differing ways in which the interview space was used to express themselves. In Tim's case, a high level of anger was directed towards health and social care services; he felt he had been treated poorly and wanted the system to change. Beneath that anger seemed to be someone who was frightened and in a vulnerable position of losing control of his role within his family. However, Tim clearly wanted people to know how angry he felt. Michael appeared to use the space differently, the tone of the interview was more of someone who was experiencing a deep sadness and exhaustion as a result of what he and his family had experienced. There was a sense of someone who had tried hard to support his partner but this involved personal consequences and sacrifices. He did not present as angry but disappointed with the physical lack of appropriate perinatal mental health services he had encountered.

I was left with strong feelings following both Tim and Michael's interviews, which I will further explore below. This encouraged me to reflect on what taking part in the interviews may have been like for fathers. For some, the interview felt like a helpful space to reflect on their experiences. There was a sense the interview served as a cathartic marker in their journey and fostered a hope that things could improve for them, their family and services. This felt encouraging for me as a researcher, reinforcing a sense of purpose for the study and a belief it could provide something useful for the participants and the wider community. My position as independent of the MBU seemed to enable most participants to use the space to freely express their

lived experiences. Additionally, the exploratory nature of IPA may have given participants permission to say whatever they deemed to be important (Smith, Flowers & Larkin, 2009). As a researcher, the minimal need for prompts enabled me to fully listen and engage with what participants were saying, without being distracted by planning further questioning.

In contrast, other participants commented on the interview process creating a feeling of reliving some difficult experiences and bringing back the associated emotions. Whilst these feelings were not overwhelming for participants, this challenged me in my position as a researcher and I felt some guilt that I may have poked at wounds that were still raw. The intentional timing of interviews resulted in gaining some rich insights into the participants' current emotional worlds; although I wondered whether this was always beneficial to the participants. My feelings of guilt could highlight some ethical dilemmas regarding how to conduct qualitative research in a way that creates minimal distress for participants. However, I also remain curious as to whether my experiences of myself as a researcher and the participants' experience of me were matched (Bruner, 1986). Perhaps my feelings were less of a direct reflection of the participants' experience of the interview and more of a transference response, as I found myself identifying as part of a healthcare system which participants had not always found helpful.

Being open to having my assumptions and ideas challenged was an interesting part of this experience. The lack of previous research in this setting meant my own ideas about how men might experience this situation could well be wrong. During a bracketing discussion prior to recruitment, I was struck by my strong belief that fathers would be very distressed by being separated from their family, particularly

the baby. This realisation encouraged me to aim for neutrality in my questioning and not assume all fathers would have experienced negative emotions. What became apparent during the interviews was that fathers generally viewed MBUs as a valuable resource, despite the separation from their family. These men often expressed positive feelings of relief and gratefulness for the help offered by the MBU. Nevertheless, fathers described painful feelings of loss, which were much stronger for their partner than the baby. Although this had taken me by surprise, it made sense when fathers described having built a stronger connection with their partner. There was a sense fathers not only felt they were not being listened to by services, but their partner was also unable to connect with them whilst unwell with PPP.

I noted I had started the research process in a position of feeling more disconnected from the subject matter, as a woman with no children and no personal experience of psychosis. However, I had somewhat naively failed to recognise the more fundamental nature of the research. The study was not just focusing on parenting, MBUs and psychosis; it was exploring families and relationships. I later found I could emotionally connect with what participants were saying more than I had anticipated, by relating to my own experiences of being part of a family and in a long-term relationship. Although I am not a parent, I have experiences of being parented and was struck by my mixed responses to the participants' different approaches to this role. Whilst this was useful in considering my responses to and analysis of the interview material, at times it felt challenging. When I was more absorbed in the emotional nature of the research, I was aware of the need to practice self-care to manage my own responses.

3.4 The challenge of (really) listening to what fathers have to say

Noting my own responses to interviews proved helpful in considering the challenges services may face in engaging with fathers. Whilst the completion of each interview felt rewarding, the emotional reactions after listening to painful and saddening experiences could sometimes be draining. In some respect, I was in a privileged position to have enough space and time to process this before moving on to further stages of the research or conducting additional interviews. I wondered whether part of the reasons fathers did not feel their needs were taken into account by services, was due to the demands on space, time and emotional resources of staff already being taken up by caring for the mother and baby. My own experience was one of finding it challenging to focus on analysing and connecting with transcripts whilst managing emotional demands in my clinical work and personal life. This experience could apply to other healthcare staff who under multiple pressures and limited resources, may unintentionally be unable to listen to fathers as much as they need it. Additionally, I sometimes felt disheartened with being part of a system that had let families down, whilst feeling I lacked power to change it.

Relatedly, an additional response was one of defensiveness for service staff. In Tim's case I noticed myself fluctuating between connecting with his sense of anger and injustice, and feeling under direct attack as a healthcare professional. This was perhaps enhanced by my previous connections with an MBU and my appreciation of their work. At times I felt frustrated when the blame for challenging circumstances was placed solely on services and found it difficult to connect with the underlying sense of fear and vulnerability. Again, I reflected on the possibility of my response mirroring that of staff working for the service and providing a possible explanation

for some fathers not feeling heard. Despite participants' anger not being aimed directly at me, occasionally I felt uncomfortable with the aggression expressed towards professionals. When faced with an actual or perceived personal attack and aggression, it is likely staff could disconnect from the father's experience in order to protect themselves (Winstanley & Whittington, 2002). I had the luxury of having space to think beyond the expressed anger to consider what could really be going on underneath. When this space is not available, it is perhaps understandable staff could feel 'burnt out' and appear to not be listening (Jenkins & Elliott, 2004). Through supervision discussions, I became aware of the possibility fathers may present their stories differently in a controlled interview environment. Whilst it is important to hear men's perspectives, the same limitations of women's only research applied in that only one side of the story was being presented. There is also the possibility staff were not able to fully involve men in their partners' care for various reasons, such as needing to make urgent decisions or confidentiality issues (Marshall & Solomon, 2000).

In addition to the emotional demands of listening to men's stories, I was aware of challenges in applying the IPA methodology. Having no prior experience of the method, I lacked confidence in adopting the 'double hermeneutic' interpretative stance required (Smith et al., 2009). I found myself feeling frustrated with the detailed analytic process and a self-imposed pressure to get the method 'right'. At times it seemed I could not see the wood for the trees, and had lost touch with the emotional content of the interviews. Additionally, I experienced a tension in being interpretative 'enough' as the researcher, without losing the original essence of what the person had said. In my clinical practice I identify with more interpretative and dynamic approaches, however I found the lack of opportunity to receive feedback on

my interpretations from participants affected my confidence in their validity. My concern was perhaps related to a fear of missing the point of what participants had said in my interpretation, thus becoming another person who had not truly listened to them. I felt a sense of power as a researcher which I did not wish to misuse, and a responsibility to communicate the participants' stories accurately.

3.5 Finding my own voice

To work through the frustrations of analysis, I felt I had to give up the idea of there being a correct interpretation or set of themes. Accepting the subjectivity of qualitative research enabled me to feel more confident in constructing a coherent account of participants' experiences. In beginning to write the empirical paper, I started to reconnect with the emotions and experiences described in the men's stories. The responsibility of sharing their stories in a way that other people would want to listen to them became an enjoyable privilege rather than a burden (Gilgun, 2011). Whilst research skills are a key component of the qualification and work of clinical psychologists, I did not previously have strong ambitions to produce or publish research work. However, in my experience of engaging with the men in this study, I began to appreciate the value of psychologists conducting research in order to help provide a voice for people who may otherwise go unrecognised. I hoped to be able to do justice to the fathers' experiences, particularly as a way of making their participation feel worthwhile given the emotional nature of many of the interviews.

Throughout the research process I became aware of the need for confidence and belief in what you are studying. From the early stages of writing a research proposal and applying for ethical approval through to writing drafts of papers and a future viva, your work is opened up to be questioned by others. In some respects I could

identify with some of the fathers' feelings of vulnerability and potential to be scrutinised regarding their parenting. However, their willingness to share such personal experiences in a public domain has encouraged me to consider ways of disseminating this, for the potential benefit of services and hopefully future families. In doing so, I have been aware of the political nature of sharing research findings. As MBUs are not widespread across the UK, the professional community is relatively small. In some ways conducting this research felt like a risk: if participants were highly critical of MBUs this could have implications in an already under resourced area. Whilst participants did note difficulties in their engagement with services, they identified many positive aspects of MBU care. It feels important to highlight this, along with areas for improvement, particularly given the potential pressures on service staff explored previously. The recent public attention being paid to perinatal mental health services means it is an ideal time to conduct and share research in this area. In contrast to my earlier feelings of powerlessness, it seems there is currently an avenue to voice the participants' support and concerns for these services.

In addition to using my voice to share findings related to this study, I hope this experience will have a positive impact on my clinical practice. I have always enjoyed working collaboratively with service users and their families. However, I have recognised that I perhaps have not always engaged or listened as well as I could have whilst experiencing the demands of training. From my perspective as a healthcare professional, I feel it is possible the staff encountered by participants acted with good intentions whilst under pressure. However, this does not negate the fact that all of the fathers felt ignored or excluded at least once throughout their contact across different health and social care services. This has served as a reminder for me to be more mindful of the challenging situations all families of service users face, and to make

time to listen to them where possible. This is an area of clinical psychologists' work I believe to be valuable and important. As I approach the end of training and qualification, it is perhaps time to place a greater focus on 'putting my money where my mouth is' in regards to acting on and sharing this belief.

3.6 Conclusion

Men have often lacked inclusion in perinatal mental health research and clinical practice. Participating in research into fathers' experiences of their partner's PPP gave these men opportunity to have a voice and tell their stories. Feeling unheard by services was a common experience and one which prompted feelings of disappointment, powerlessness, frustration and defensiveness in me as a researcher. The challenges I faced in listening to men's difficult emotional experiences could extend to the healthcare staff whom were perceived as not listening. It may be difficult for staff to truly listen to women's partners when they face multiple demands and pressures, aggressive communications and a lack of space for reflection. Despite the challenges these fathers faced in engaging with services, it was heartening to hear their gratitude for the specialist help of MBUs. Providing these men with space to express their views was a humbling and rewarding experience, which has motivated me to share these stories. The current attention being paid to perinatal mental health services presents an ideal opportunity for research in this area to facilitate change. Finally, the research process has reminded me of the importance of listening to families and carers of service users within my own clinical practice.

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Appendix A

Author instructions for Archives of Women's Mental Health

Archives of Women's Mental Health

Editor-in-Chief: M. Steiner

ISSN: 1434-1816 (print version)

ISSN: 1435-1102 (electronic version)

Journal no. 737

Instructions for Authors

TYPES OF PAPERS

Original Contributions / Research Articles

Original Contributions / Research Articles should be arranged under the following headings:

Abstract:

Not to exceed 150–200 words

Keywords:

Not more than five

Introduction:

To include the background literature as well as the objective (s) of the study

Materials and Methods:

Describe the basic study design. State the setting (e.g., primary care, referral center). Explain selection of study subjects and state the system of diagnostic criteria used. Describe any interventions and include their duration and method of administration. Indicate the main outcome measure(s). Specify the dates in which data were collected (month/year to month/year).

Results:

Include the key findings. Give specific data and their statistical significance, if possible (include p value if findings were significant). Subset Ns should accompany percentages if the total N is <100 Discussion and Conclusion. sections conforming to standard scientific reporting style.

Discussion and Conclusion

Sections conform to standard scientific reporting style

Reviews

Reviews are intended to draw together important information from recent publications on subjects of broad interest. They are meant to provide a venue for critical examination and considered opinion of such information.

Reviews are not meant to be encyclopedic and should not exceed 20 pages when typed. Reviews may contain figures and tables. References should be cited in the same way as in full-length articles.

It is recommended that authors contact the Editor-in-Chief beforehand to determine if a proposed review is likely to be suitable for publication. Reviews should be comprehensive, fully referenced expositions of subjects of general interest, including background information and detailed critical analyses of current work in the field and its significance. They should be designed to serve as source materials.

Short Communications

Short Communications should be prepared as described above except for the following:

The average length of Short Communications should not exceed 1500 words and may include a maximum of two figures or tables and up to 12 references. The summary should not exceed 80 words.

Short Communications can only be accepted or rejected.

Letters to the Editor

Letters to the Editor should be a maximum of 750 words and may include one table or figure and up to five references.

Manuscript Submission

Submission of a manuscript implies: that the work described has not been published before; that it is not under consideration for publication anywhere else; that its publication has been approved by all co-authors, if any, as well as by the responsible authorities – tacitly or explicitly – at the institute where the work has been carried out. The publisher will not be held legally responsible should there be any claims for compensation.

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Authors wishing to include figures, tables, or text passages that have already been published elsewhere are required to obtain permission from the copyright owner(s) for both the print and online format and to include evidence that such permission has been granted when submitting their papers. Any material received without such evidence will be assumed to originate from the authors.

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Authors should submit their manuscripts online. Electronic submission substantially reduces the editorial processing and reviewing times and shortens overall publication times. Please follow the hyperlink “Submit online” on the right and upload all of your manuscript files following the instructions given on the screen.

Reviewer suggestions

Authors will be kindly asked to suggest up to 5 potential reviewers for their papers. These recommendations will be of help to ensure the journal’s high scientific level and will support a quick review process and thus shorten the time from manuscript submission to publication.

Please note that only reviewer suggestions from institutions of international reputation other than the institution of the corresponding author will be taken into consideration, otherwise your paper can not be considered for further handling.

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The title page should include:

The name(s) of the author(s)

A concise and informative title

The affiliation(s) and address(es) of the author(s)

The e-mail address, telephone and fax numbers of the corresponding author

Abstract

Please provide a structured abstract of 150 to 250 words which should be divided into the following sections:

Purpose (stating the main purposes and research question)

Methods

Results

Conclusions

Keywords

Please provide 4 to 6 keywords which can be used for indexing purposes.

Important note:

Please ensure your authorship is correct, check spelling of authors' names, line up, etc.

No changes can be made once copyright has been transferred to us.

Text Formatting

Manuscripts should be submitted in Word.

- Use a normal, plain font (e.g., 10-point Times Roman) for text.
- Use italics for emphasis.
- Use the automatic page numbering function to number the pages.
- Do not use field functions.
- Use tab stops or other commands for indents, not the space bar.
- Use the table function, not spreadsheets, to make tables.
- Use the equation editor or MathType for equations.
- Save your file in docx format (Word 2007 or higher) or doc format (older Word versions).

Manuscripts with mathematical content can also be submitted in LaTeX.

[LaTeX macro package \(zip, 182 kB\)](#)

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Please use no more than three levels of displayed headings.

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Abbreviations should be defined at first mention and used consistently thereafter.

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Footnotes can be used to give additional information, which may include the citation of a reference included in the reference list. They should not consist solely of a reference citation, and they should never include the bibliographic details of a reference. They should also not contain any figures or tables.

Footnotes to the text are numbered consecutively; those to tables should be indicated by superscript lower-case letters (or asterisks for significance values and other statistical data). Footnotes to the title or the authors of the article are not given reference symbols.

Always use footnotes instead of endnotes.

Acknowledgments

Acknowledgments of people, grants, funds, etc. should be placed in a separate section before the reference list. The names of funding organizations should be written in full.

Citation

Cite references in the text by name and year in parentheses. Some examples:

Negotiation research spans many disciplines (Thompson 1990).

This result was later contradicted by Becker and Seligman (1996).

This effect has been widely studied (Abbott 1991; Barakat et al. 1995; Kelso and Smith 1998; Medvec et al. 1999).

Reference list

The list of references should only include works that are cited in the text and that have been published or accepted for publication. Personal communications and unpublished works should only be mentioned in the text. Do not use footnotes or endnotes as a substitute for a reference list.

Reference list entries should be alphabetized by the last names of the first author of each work.

- Journal article
Gamelin FX, Baquet G, Berthoin S, Thevenet D, Nourry C, Nottin S, Bosquet L (2009) Effect of high intensity intermittent training on heart rate variability in prepubescent children. *Eur J Appl Physiol* 105:731-738. doi: 10.1007/s00421-008-0955-8
Ideally, the names of all authors should be provided, but the usage of “et al” in long author lists will also be accepted:
Smith J, Jones M Jr, Houghton L et al (1999) Future of health insurance. *N Engl J Med* 341:325–329
- Article by DOI

Slifka MK, Whitton JL (2000) Clinical implications of dysregulated cytokine production. J Mol Med. doi:10.1007/s001090000086

- Book

South J, Blass B (2001) The future of modern genomics. Blackwell, London

- Book chapter

Brown B, Aaron M (2001) The politics of nature. In: Smith J (ed) The rise of modern genomics, 3rd edn. Wiley, New York, pp 230-257

- Online document

Cartwright J (2007) Big stars have weather too. IOP Publishing PhysicsWeb. <http://physicsweb.org/articles/news/11/6/16/1>. Accessed 26 June 2007

- Dissertation

Trent JW (1975) Experimental acute renal failure. Dissertation, University of California

Always use the standard abbreviation of a journal's name according to the ISSN List of Title Word Abbreviations, see

- [ISSN.org LTWA](http://www.issn.org/LTWA)

If you are unsure, please use the full journal title.

For authors using EndNote, Springer provides an output style that supports the formatting of in-text citations and reference list.

[EndNote style \(zip, 1 kB\)](#)

TABLES

- All tables are to be numbered using Arabic numerals.
- Tables should always be cited in text in consecutive numerical order.
- For each table, please supply a table caption (title) explaining the components of the table.
- Identify any previously published material by giving the original source in the form of a reference at the end of the table caption.
- Footnotes to tables should be indicated by superscript lower-case letters (or asterisks for significance values and other statistical data) and included beneath the table body.

ARTWORK AND ILLUSTRATIONS GUIDELINES

Electronic Figure Submission

- Supply all figures electronically.
- Indicate what graphics program was used to create the artwork.
- For vector graphics, the preferred format is EPS; for halftones, please use TIFF format. MSOffice files are also acceptable.
- Vector graphics containing fonts must have the fonts embedded in the files.
- Name your figure files with "Fig" and the figure number, e.g., Fig1.eps.

Line Art

- Definition: Black and white graphic with no shading.
- Do not use faint lines and/or lettering and check that all lines and lettering within the figures are legible at final size.
- All lines should be at least 0.1 mm (0.3 pt) wide.
- Scanned line drawings and line drawings in bitmap format should have a minimum resolution of 1200 dpi.

- Vector graphics containing fonts must have the fonts embedded in the files.

Halftone Art

Definition: Photographs, drawings, or paintings with fine shading, etc.

If any magnification is used in the photographs, indicate this by using scale bars within the figures themselves.

Halftones should have a minimum resolution of 300 dpi.

Combination Art

Definition: a combination of halftone and line art, e.g., halftones containing line drawing, extensive lettering, color diagrams, etc.

Combination artwork should have a minimum resolution of 600 dpi.

Color Art

Color art is free of charge for online publication.

If black and white will be shown in the print version, make sure that the main information will still be visible. Many colors are not distinguishable from one another when converted to black and white. A simple way to check this is to make a xerographic copy to see if the necessary distinctions between the different colors are still apparent.

If the figures will be printed in black and white, do not refer to color in the captions.

Color illustrations should be submitted as RGB (8 bits per channel).

Figure Lettering

- To add lettering, it is best to use Helvetica or Arial (sans serif fonts).
- Keep lettering consistently sized throughout your final-sized artwork, usually about 2–3 mm (8–12 pt).
- Variance of type size within an illustration should be minimal, e.g., do not use 8-pt type on an axis and 20-pt type for the axis label.
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- Do not include titles or captions within your illustrations.

Figure Numbering

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Figures should always be cited in text in consecutive numerical order.

Figure parts should be denoted by lowercase letters (a, b, c, etc.).

If an appendix appears in your article and it contains one or more figures, continue the consecutive numbering of the main text. Do not number the appendix figures,

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Figure Captions

- Each figure should have a concise caption describing accurately what the figure depicts. Include the captions in the text file of the manuscript, not in the figure file.
- Figure captions begin with the term **Fig.** in bold type, followed by the figure number, also in bold type.
- No punctuation is to be included after the number, nor is any punctuation to be placed at the end of the caption.
- Identify all elements found in the figure in the figure caption; and use boxes, circles, etc., as coordinate points in graphs.

- Identify previously published material by giving the original source in the form of a reference citation at the end of the figure caption.

Figure Placement and Size

When preparing your figures, size figures to fit in the column width.

For most journals the figures should be 39 mm, 84 mm, 129 mm, or 174 mm wide and not higher than 234 mm.

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Springer accepts electronic multimedia files (animations, movies, audio, etc.) and other supplementary files to be published online along with an article or a book chapter. This feature can add dimension to the author's article, as certain information cannot be printed or is more convenient in electronic form.

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Supply all supplementary material in standard file formats.

Please include in each file the following information: article title, journal name, author names; affiliation and e-mail address of the corresponding author.

To accommodate user downloads, please keep in mind that larger-sized files may require very long download times and that some users may experience other problems during downloading.

Audio, Video, and Animations

Always use MPEG-1 (.mpg) format.

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Submit your material in PDF format; .doc or .ppt files are not suitable for long-term viability.

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Spreadsheets should be converted to PDF if no interaction with the data is intended.

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Name the files consecutively, e.g. “ESM_3.mpg”, “ESM_4.pdf”.

Captions

For each supplementary material, please supply a concise caption describing the content of the file.

Processing of supplementary files

Electronic supplementary material will be published as received from the author without any conversion, editing, or reformatting.

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In order to give people of all abilities and disabilities access to the content of your supplementary files, please make sure that

The manuscript contains a descriptive caption for each supplementary material

Video files do not contain anything that flashes more than three times per second (so that users prone to seizures caused by such effects are not put at risk)

INTEGRITY OF RESEARCH AND REPORTING

Ethical standards

Manuscripts submitted for publication must contain a statement to the effect that all human and animal studies have been approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments.

It should also be stated clearly in the text that all persons gave their informed consent prior to their inclusion in the study. Details that might disclose the identity of the subjects under study should be omitted.

These statements should be added in a separate section before the reference list. If these statements are not applicable, authors should state: The manuscript does not contain clinical studies or patient data.

The editors reserve the right to reject manuscripts that do not comply with the above-mentioned requirements. The author will be held responsible for false statements or failure to fulfill the above-mentioned requirements

Conflict of interest

Authors must indicate whether or not they have a financial relationship with the organization that sponsored the research. This note should be added in a separate section before the reference list.

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Manuscripts that are accepted for publication will be checked by our copyeditors for spelling and formal style. This may not be sufficient if English is not your native language and substantial editing would be required. In that case, you may want to have your manuscript edited by a native speaker prior to submission. A clear and concise language will help editors and reviewers concentrate on the scientific content of your paper and thus smooth the peer review process.

Appendix B

Data extraction form

Reference:

Population

Number of participants:

Gender:

Age:

Ethnicity/social status (demographics):

Marital status:

Setting:

Phenomenon of interest/intervention

Postnatal depression:

Relationship factor:

Controls:

Context

Operational definitions:

Study aim(s):

Times of intervention/length of follow ups:

Outcomes

Key findings:

Key limitations:

Conclusions:

Other relevant details:

Study design:

Type of study/design:

Statistical tests used:

Measures used:

Appendix C

Quality appraisal tool

	Criteria	Yes/Partial/No/ Not reported/NA	Comments
Study rationale and objectives	1. Has the study rationale been clearly described?		
	2. Have the specific objectives of the study been reported?		
Methods: design	3. Has the study design been stated?		
Methods: participant selection	4. Has the location and setting of the study been reported?		
	5. Have relevant dates (including recruitment period, data collection and follow up) been reported?		
	6. Have the inclusion and exclusion criteria been stated?		
	7. Has the method for determining sample size been reported?		
	8. Have the sources and methods of selecting participants (and controls if applicable) been reported?		
	9. Are the selected participants or areas representative of the eligible population or area?		
Method: outcome measurement	10. Have all variables of interest (e.g. postnatal depression, relationship factor) been clearly defined?		
	11. Has the study used the DSM diagnostic criteria for major depression (with postpartum onset) to identify postnatal depression?		
	12. Have the psychometric properties of measures of postnatal depression been reported and can the measures be considered as valid and reliable?		
	13. Have the measures for all other variables of interest (relationship factors) been described, including validity and reliability?		
	14. Have the methods of data collection for all variables of interest been reported?		
	15. If applicable, was the follow-up time meaningful?		
Bias and confounding	16. Have any efforts to address potential sources of bias been described?		
	17. Was clinical data collected prospectively?		
	18. Has the likelihood of significant recall bias or significant withdrawal bias been		

	addressed within the study design?		
	19. Did methods of data collection address issues of bias/reliability (e.g. where data was collected by interview or questionnaire, were multiple informants approached to address self-report bias?)		
	20. Have potential confounding variables been defined?		
	21. Has the study made efforts made to control for possible confounding variables within the design and/or analysis?		
Results and analysis	22. Have drop-out rates, reasons and characteristics of participants lost at follow-up been reported?		
	23. Have the demographic characteristics of participants been adequately described?		
	24. Were the statistical methods chosen suitable for the chosen study design?		
	25. Was the sample of an adequate size for the analyses to be sufficiently powered (referring to power calculations if applicable)?		
Validity	26. Was the generalizability of the results discussed in relation to the source population (external validity)?		
	27. Have limitations of the study (including potential sources of bias) been identified and discussed?		
	28. Was the study conducted in the UK?		
Conflicts of interest	29. Is there a declaration of conflict of interest?		
	30. Have sources of funding been stated?		

Appendix D

The STROBE statement

STROBE Statement—checklist of items that should be included in reports of observational studies

	Item No.	Recommendation	Page No.	Relevant text from manuscript
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found		
Introduction				
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported		
Objectives	3	State specific objectives, including any prespecified hypotheses		
Methods				
Study design	4	Present key elements of study design early in the paper		
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection		
Participants	6	(a) <i>Cohort study</i> —Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up <i>Case-control study</i> —Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls <i>Cross-sectional study</i> —Give the eligibility criteria, and the sources and methods of selection of participants (b) <i>Cohort study</i> —For matched studies, give matching criteria and number of exposed and unexposed <i>Case-control study</i> —For matched studies, give matching criteria and the number of controls per case		
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable		
Data sources/measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group		
Bias	9	Describe any efforts to address potential sources of bias		
Study size	10	Explain how the study size was arrived at		

Continued on next page

Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why		
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding		
		(b) Describe any methods used to examine subgroups and interactions		
		(c) Explain how missing data were addressed		
		(d) <i>Cohort study</i> —If applicable, explain how loss to follow-up was addressed <i>Case-control study</i> —If applicable, explain how matching of cases and controls was addressed <i>Cross-sectional study</i> —If applicable, describe analytical methods taking account of sampling strategy		
		(e) Describe any sensitivity analyses		
Results				
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed (b) Give reasons for non-participation at each stage (c) Consider use of a flow diagram		
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders (b) Indicate number of participants with missing data for each variable of interest (c) <i>Cohort study</i> —Summarise follow-up time (eg, average and total amount)		
Outcome data	15*	<i>Cohort study</i> —Report numbers of outcome events or summary measures over time <i>Case-control study</i> —Report numbers in each exposure category, or summary measures of exposure <i>Cross-sectional study</i> —Report numbers of outcome events or summary measures		
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included (b) Report category boundaries when continuous variables were categorized (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period		

Continued on next page

Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses
Discussion		
Key results	18	Summarise key results with reference to study objectives
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence
Generalisability	21	Discuss the generalisability (external validity) of the study results
Other information		
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at <http://www.plosmedicine.org/>, Annals of Internal Medicine at <http://www.annals.org/>, and Epidemiology at <http://www.epidem.com/>). Information on the STROBE Initiative is available at www.strobe-statement.org.

Appendix E

NICE guidelines for quality scoring in systematic reviews

Appendix G Quality appraisal checklist – quantitative studies reporting correlations and associations

A correlates review (see [section 3.3.4](#)) attempts to establish the factors that are associated or correlated with positive or negative health behaviours or outcomes. Evidence for correlate reviews will come both from specifically designed correlation studies and other study designs that also report on correlations.

This checklist^[a] has been developed for assessing the validity of studies reporting correlations. It is based on the appraisal step of the 'Graphical appraisal tool for epidemiological studies (GATE)', developed by Jackson et al. (2006).

This checklist enables a reviewer to appraise a study's internal and external validity after addressing the following key aspects of study design: characteristics of study participants; definition of independent variables; outcomes assessed and methods of analyses.

Like GATE, this checklist is intended to be used in an electronic (Excel) format that will facilitate both the sharing and storage of data, and through linkage with other documents, the compilation of research reports. Much of the guidance to support the completion of the critical appraisal form that is reproduced below also appears in 'pop-up' windows in the electronic version^[a].

There are 5 sections of the revised GATE. Section 1 seeks to assess the key population criteria for determining the study's **external validity** – that is, the extent to which the findings of a study are generalisable beyond the confines of the study to the study's source population.

Sections 2 to 4 assess the key criteria for determining the study's **internal validity** – that is, making sure that the study has been carried out carefully, and that the identified associations are valid and are not due to some other (often unidentified) factor.

Checklist items are worded so that 1 of 5 responses is possible:

++	Indicates that for that particular aspect of study design, the study has been designed or conducted in such a way as to minimise the risk of bias.
----	--

+	Indicates that either the answer to the checklist question is not clear from the way the study is reported, or that the study may not have addressed all potential sources of bias for that particular aspect of study design.
–	Should be reserved for those aspects of the study design in which significant sources of bias may persist.
Not reported (NR)	Should be reserved for those aspects in which the study under review fails to report how they have (or might have) been considered.
Not applicable (NA)	Should be reserved for those study design aspects that are not applicable given the study design under review (for example, allocation concealment would not be applicable for case–control studies).

In addition, the reviewer is requested to complete in detail the comments section of the quality appraisal form so that the grade awarded for each study aspect is as transparent as possible.

Each study is then awarded an overall study quality grading for internal validity (IV) and a separate one for external validity (EV):

- ++ All or most of the checklist criteria have been fulfilled, where they have not been fulfilled the conclusions are very unlikely to alter.
- + Some of the checklist criteria have been fulfilled, where they have not been fulfilled, or not adequately described, the conclusions are unlikely to alter.
- – Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

Checklist

Study identification: Include full citation details	
Study design: <ul style="list-style-type: none"> • Refer to the glossary of study designs (appendix D) and the algorithm for classifying experimental and observational study designs (appendix E) to best describe the paper's underpinning study design 	

Guidance topic:		
Assessed by:		
Section 1: Population		
1.1 Is the source population or source area well described? <ul style="list-style-type: none"> Was the country (e.g. developed or non-developed, type of health care system), setting (primary schools, community centres etc), location (urban, rural), population demographics etc adequately described? 	++ + – NR NA	Comments:
1.2 Is the eligible population or area representative of the source population or area? <ul style="list-style-type: none"> Was the recruitment of individuals, clusters or areas well defined (e.g. advertisement, birth register)? Was the eligible population representative of the source? Were important groups underrepresented? 	++ + – NR NA	Comments:
1.3 Do the selected participants or areas represent the eligible population or area? <ul style="list-style-type: none"> Was the method of selection of participants from the eligible population well described? What % of selected individuals or clusters agreed to participate? Were there any sources of bias? Were the inclusion or exclusion criteria explicit and appropriate? 	++ + – NR NA	Comments:
Section 2: Method of selection of exposure (or comparison) group		
2.1 Selection of exposure (and comparison) group. How was selection bias minimised? <ul style="list-style-type: none"> How was selection bias minimised? 	++ + – NR NA	Comments:

2.2 Was the selection of explanatory variables based on a sound theoretical basis? <ul style="list-style-type: none"> • How sound was the theoretical basis for selecting the explanatory variables? 	++ + – NR NA	Comments:
2.3 Was the contamination acceptably low? <ul style="list-style-type: none"> • Did any in the comparison group receive the exposure? • If so, was it sufficient to cause important bias? 	++ + – NR NA	Comments:
2.4 How well were likely confounding factors identified and controlled? <ul style="list-style-type: none"> • Were there likely to be other confounding factors not considered or appropriately adjusted for? • Was this sufficient to cause important bias? 	++ + – NR NA	Comments:
2.5 Is the setting applicable to the UK? <ul style="list-style-type: none"> • Did the setting differ significantly from the UK? 	++ + – NR NA	Comments:
Section 3: Outcomes		

<p>3.1 Were the outcome measures and procedures reliable?</p> <ul style="list-style-type: none"> • Were outcome measures subjective or objective (e.g. biochemically validated nicotine levels ++ vs self-reported smoking –)? • How reliable were outcome measures (e.g. inter- or intra-rater reliability scores)? • Was there any indication that measures had been validated (e.g. validated against a gold standard measure or assessed for content validity)? 	<p>++ + – NR NA</p>	<p>Comments:</p>
<p>3.2 Were the outcome measurements complete?</p> <ul style="list-style-type: none"> • Were all or most of the study participants who met the defined study outcome definitions likely to have been identified? 	<p>++ + – NR NA</p>	<p>Comments:</p>
<p>3.3 Were all the important outcomes assessed?</p> <ul style="list-style-type: none"> • Were all the important benefits and harms assessed? • Was it possible to determine the overall balance of benefits and harms of the intervention versus comparison? 	<p>++ + – NR NA</p>	<p>Comments:</p>
<p>3.4 Was there a similar follow-up time in exposure and comparison groups?</p> <ul style="list-style-type: none"> • If groups are followed for different lengths of time, then more events are likely to occur in the group followed-up for longer distorting the comparison. • Analyses can be adjusted to allow for differences in length of follow-up (e.g. using person-years). 	<p>++ + – NR NA</p>	<p>Comments:</p>

3.5 Was follow-up time meaningful? <ul style="list-style-type: none"> • Was follow-up long enough to assess long-term benefits and harms? • Was it too long, e.g. participants lost to follow-up? 	++ + - NR NA	Comments:
Section 4: Analyses		
4.1 Was the study sufficiently powered to detect an intervention effect (if one exists)? <ul style="list-style-type: none"> • A power of 0.8 (i.e. it is likely to see an effect of a given size if one exists, 80% of the time) is the conventionally accepted standard. • Is a power calculation presented? If not, what is the expected effect size? Is the sample size adequate? 	++ + - NR NA	Comments:
4.2 Were multiple explanatory variables considered in the analyses? <ul style="list-style-type: none"> • Were there sufficient explanatory variables considered in the analysis? 	++ + - NR NA	Comments:
4.3 Were the analytical methods appropriate? <ul style="list-style-type: none"> • Were important differences in follow-up time and likely confounders adjusted for? 	++ + - NR NA	Comments:
4.6 Was the precision of association given or calculable? Is association meaningful? <ul style="list-style-type: none"> • Were confidence intervals or p values for effect estimates given or possible to calculate? • Were CIs wide or were they sufficiently precise to aid decision-making? If precision is lacking, is this because the study is under-powered? 	++ + - NR NA	Comments:

Section 5: Summary

5.1 Are the study results internally valid (i.e. unbiased)? <ul style="list-style-type: none"> • How well did the study minimise sources of bias (i.e. adjusting for potential confounders)? • Were there significant flaws in the study design? 	++ + –	Comments:
5.2 Are the findings generalisable to the source population (i.e. externally valid)? <ul style="list-style-type: none"> • Are there sufficient details given about the study to determine if the findings are generalisable to the source population? • Consider: participants, interventions and comparisons, outcomes, resource and policy implications. 	++ + –	Comments:

^[a] Appraisal form derived from: Jackson R, Ameratunga S, Broad J et al. (2006) The GATE frame: critical appraisal with pictures. Evidence Based Medicine 11: 35–8.

^[a] Available from CPHE on request.

Appendix F

Summary of quality assessment results

Criteria	Akin2010	B&C2014	D&R2006	D&M2012	F&L2009	Grem2011	Hock1995	Kers2012	Logs1994	OHar1985	P&W2007	Salm2006	Schw1992	S&H2008	Stap2012	Whis2011	Wynt2014			
1 Rationale	Y	Y	Y	Y	Y	Y	Y	Y	Y	P	Y	Y	Y	Y	Y	Y	Y			
2 Objectives	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
3 Design	P	N	P	Y	P	Y	Y	Y	Y	N	N	N	N	P	Y	Y	Y			
4 Location	Y	Y	Y	Y	Y	Y	Y	Y	P	Y	Y	Y	P	Y	P	P	Y			
5 Dates	Y	Y	Y	Y	Y	Y	P	Y	P	P	P	P	P	P	P	P	P			
6 Criteria	P	Y	Y	Y	Y	Y	Y	N	Y	N	N	P	N	N	Y	Y	Y			
7 Sample size	N	N	Y	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N			
8 Pp sources	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	P			
9 Pp representative	P	NR	NR	NR	N	NR	P	NR	NR	NR	N	NR	NR	P?	Y	N	P			
10 Defined variables	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
11 DSM PND	Y	N	N	N	N	N	N	N	N	N	N	N	N	P	N	P	N			
12 PND psychometrics	Y	NR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
13 Relationship psychometrics	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
14 Data collection methods	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
15 Meaningful follow-up	Y	NA	Y	N	Y	Y	Y	Y	Y	Y	NA	Y	NA	Y	Y	Y	Y			
16 Bias addressed	P	NR	NR	N	N	NR	N	P	N	NR	NR	N	N	P	P	Y	N	Y	Yes	
17 Prospective data	N	Y	N	Y	N	Y	Y	Y	Y	N	Y	Y	NA	Y	Y	Y	N	N	No	
18 Recall/withdrawal bias	NR	NR	NR	N	NR	NR	NR	P	N	NR	NR	P	N	Y	NR	NR	N	P	Partially	
19 Data collection bias	N	N	NR	NR	P	NR	Y	P	N	P	N	P	N	N	N	P	P	NR	Not reported	
20 Defined confounders	Y	Y	NR	N	Y	Y	N	N	P	N	Y	Y	N	Y	Y	Y	Y	NA	Not applicable	
21 Confounders addressed	Y	Y	NR	NR	Y	Y	Y	Y	P	N	Y	Y	N	Y	Y	Y	Y			
22 Drop-out reports	P	NA	N	Y	N	Y	N	P	N	N	NA	Y	N	Y	Y	P	P			
23 Demographics described	Y	Y	Y	Y	Y	Y	Y	P	Y	Y	Y	P	P	Y	Y	Y	Y			
24 Appropriate statistics	Y	Y	Y	Y	Y	Y	Y	Y	Y	NR	P	Y	Y	Y	Y	Y	Y			
25 Sufficient power	NR	NR	Y	Y	NR	Y	NR	Y	Y	NR	N	NR	NR	NR	NR	NR	NR			
26 Generalisability discussed	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	P	P	Y	Y	Y	Y			
27 Limitations discussed	Y	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y	P	Y	Y	Y	Y			
28 UK	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N			
29 Disclosed conflict of interest	N	Y	N	N	N	Y	N	Y	N	N	N	N	N	N	N	N	Y			
30 Disclosed funding	N	N	N	N	N	N	Y	N	N	Y	N	N	N	Y	Y	N	N			

Appendix G

Semi-structured interview schedule

- 1. Can you tell me what it was like when you first found out you were going to have a child?**

Possible prompts: What feelings did you have? What kind of plans or changes did you begin to make? How were things with your partner/as a couple? How did you find the pregnancy period?

- 2. Can you describe what it was like for you as your partner began to become unwell?**

Possible prompts: When did you start to notice? What did you do? Who did you tell? How did you feel? How did you talk about it with your partner? How did you cope?

- 3. How have you experienced the time that your partner and child have been admitted to the ward?**

Possible prompts: Has it had an effect on your day-to-day life? If so, in what way? What is it like for you at home? How do you cope with it? What support do you have (for example from the wider family, friends)? How well do you feel you understand your partner's condition? What are the challenges or benefits? How have the wider family responded to the situation? If you have other children, how have they responded? How have you coped with your usual responsibilities (e.g. caring for other children, work)? Have you received input from other services/organisations (e.g. social services), if so what has your experience of this been?

- 4. What has your relationship with your partner been like whilst they have been on the ward?**

Possible prompts: How would you describe your current relationship with your partner? Do you feel that your relationship is different in any way? If so, in what way? How do you view/think about your partner/your relationship (e.g. has this remained the same or changed in some way)? How do you see yourself in your role as a partner? Has this changed during the time of the admission? What are the good or bad parts of your relationship?

- 5. What has it been like for you to be a father whilst your child has been on the ward?**

Possible prompts: What roles do you have? What has your involvement been like? What have been the good or bad parts? How have you approached your role as a father? How do you view yourself as a father? Has this changed during the time of

the admission? How do you feel about this? What has it been like to be separated from your child?

6. How do you see the future as a family?

Possible prompts: What are your plans or expectations? Have these changed?/How? How do you feel things will be when your partner and child are discharged? What do you think your relationship with your partner and child will be like? What hopes/concerns do you have?

(N.B. to change questions re: inpatient treatment to past tense if mother has been discharged and is receiving community input at the time of interview)

Appendix H

Confirmation of Coventry University ethical approval

TO WHOM IT MAY CONCERN

QRS/Ethics/Sponsor/let

Sunday, 30 March 2014

Dear Sir/Madam

Researcher's name: Rebecca Matthews
Project Reference: P18707
Project Title: First episode postpartum psychosis requiring Mother and Baby Unit admission: A study of fathers' experiences

The above named student has successfully completed the Coventry University Ethical Approval process for her project to proceed.

I should like to confirm that Coventry University is happy to act as the sole sponsor for this student and attach details of our Public Liability Insurance documentation.

With kind regards

Yours faithfully

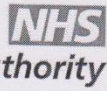


Professor Ian Marshall
Deputy Vice-Chancellor, Academic

Enc

Appendix I

Confirmation of NRES West Midlands ethical approval

 Health Research Authority NRES Committee West Midlands - Solihull The Old Chapel Royal Standard Place Nottingham NG1 6FS Telephone: 0115 8839368	
30 May 2014	
Miss Rebecca Matthews Clinical Psychology Doctorate Programme, Universities of Coventry and Warwick Coventry University, James Starley Building Priory Street, Coventry CV1 5FB	
Dear Miss Matthews	
Study title:	First episode postpartum psychosis requiring Mother and Baby Unit admission: A study of fathers' experiences
REC reference:	14/WM/0145
Protocol number:	N/A
IRAS project ID:	145128
Thank you for your letter of 28 May 2014, responding to the Committee's request for further information on the above research and submitting revised documentation.	
The further information has been considered on behalf of the Committee by the Chair.	
We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to make a request to postpone publication, please contact the REC Manager, Wendy Rees, nrescommittee.westmidlands-solihull@nhs.net	
Confirmation of ethical opinion	
On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.	
Conditions of the favourable opinion	
The favourable opinion is subject to the following conditions being met prior to the start of the study.	

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. The REC will acknowledge receipt and provide a final list of the approved documentation for the study, which can be made available to host organisations to facilitate their permission for the study. Failure to provide the final versions to the REC may cause delay in obtaining permissions.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publicly accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non clinical trials this is not currently mandatory.

If a sponsor wishes to contest the need for registration they should contact Catherine Blewett (catherineblewett@nhs.net), the HRA does not, however, expect exceptions to be made. Guidance on where to register is provided within IRAS.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see

"Conditions of the favourable opinion" below).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	Version	Date
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only)		01 July 2014
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only)		
Interview schedules or topic guides for participants	2	14 January 2014
Letter from sponsor		30 March 2014
Other [CV - Dr McGuinness]		
Other [Opt in form]	1	14 January 2014
Other [Debriefing sheet]	2	14 January 2014
Other [Poster]	3	28 May 2014
Other [CV - Fiona MacCallum]		
Participant consent form	5	28 May 2014
Participant information sheet (PIS) [Birmingham]	5	28 May 2014
Participant information sheet (PIS) [Stafford]	5	28 May 2014
REC Application Form	145128/592132/1/349	07 April 2014
Referee's report or other scientific critique report		07 April 2014
Referee's report or other scientific critique report		18 October 2014
Research protocol or project proposal	2	18 February 2014
Response to Request for Further Information		28 May 2014
Summary CV for Chief Investigator (CI)		07 April 2014
Validated questionnaire [Demographic]	2	14 January 2014

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document "*After ethical review – guidance for researchers*" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website:
<http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/>

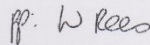
We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at <http://www.hra.nhs.uk/hra-training/>

14/WM/0145

Please quote this number on all correspondence

With the Committee's best wishes for the success of this project.

Yours sincerely



Dr Rex J Polson
Chair


Email: nrescommittee.westmidlands-solihull@nhs.net

Enclosures: "After ethical review – guidance for
researchers" [SL-AR2]

Copy to: Prof Ian Marshall
Dr Paul McDonald, Birmingham and Solihull NHS Mental Health
Foundation Trust

Appendix J

Updated confirmation of NRES West Midlands ethical approval


Health Research Authority
NRES Committee West Midlands - Solihull
The Old Chapel
Royal Standard Place
Nottingham
NG1 6FS
Tel: 0115 8839436

13 March 2015

Miss Rebecca Matthews
Clinical Psychology Doctorate Programme, Universities of Coventry and Warwick
Coventry University, James Starley Building
Priory Street, Coventry
CV1 5FB

Dear Miss Matthews

Study title:	First episode postpartum psychosis requiring Mother and Baby Unit admission: A study of fathers' experiences
REC reference:	14/WM/0145
Protocol number:	N/A
Amendment number:	Minor Amendment 2
Amendment date:	09 March 2015
IRAS project ID:	145128

Thank you for your letter of 09 March 2015, notifying the Committee of the above amendment.

The Committee does not consider this to be a "substantial amendment" as defined in the Standard Operating Procedures for Research Ethics Committees. The amendment does not therefore require an ethical opinion from the Committee and may be implemented immediately, provided that it does not affect the approval for the research given by the R&D office for the relevant NHS care organisation.

Documents received

The documents received were as follows:

Document	Version	Date
Notice of Minor Amendment		09 March 2015
Participant consent form [Tracked]	7	09 March 2015
Participant consent form [Clean]	7	09 March 2015
Participant information sheet (PIS) [Tracked]	7	09 March 2015
Participant information sheet (PIS) [Clean]	7	09 March 2015

Statement of compliance

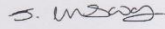
The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for

Research Ethics Committees in the UK.

14/WM/0145:

Please quote this number on all correspondence

Yours sincerely



**Joanne Unsworth
REC Assistant**



E-mail: nrescommittee.westmidlands-solihull@nhs.net

Copy to:

*Dr Paul McDonald, Birmingham and Solihull NHS Mental Health
Foundation Trust
Prof Ian Marshall*

Appendix K

Confirmation of Birmingham and Solihull Mental Health NHS Foundation Trust Research and Development department approval



Research & Innovation Department
Suite O
Radclyffe House
66/68 Hagley Road
Edgbaston
Birmingham
B16 8PF

Tel: 0121 301 4330
Tel: 0121 301 4327
Fax: 0121 301 4340

10 June 2014

Rebecca Matthews
Trainee Clinical Psychologist
Clinical Psychology Doctorate Programme
Universities of Coventry and Warwick, Coventry University
James Starley Building, Priory Street
Coventry
CV1 5FB

Dear Rebecca

**First episode postpartum psychosis requiring Mother and Baby Unit admission:
A study of fathers' experiences**

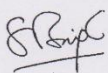
Thank you for providing us with the documentation to support your application for R&D approval. We have received notification of a favourable ethical opinion and following a review of all the documentation this study has been approved by the Trust. You may therefore commence the work.

Please note that the Trust's approval of this research is given on the understanding that you are aware of and will fulfil your responsibilities under the Department of Health's *Research Governance Framework for Health and Social Care*, including complying with any monitoring/auditing of research undertaken by the Research & Innovation Department.

In particular, whilst conducting your study you should respect the confidentiality of data obtained from participants.

Please do not hesitate in contacting the Research & Innovation Department should you require any advice or support on any aspect of your project. When contacting us it would be helpful to quote our reference number for this project: **NRR1287**.


Yours sincerely



Professor Swaran P Singh
Interim Director of Research & Innovation

Chair: Sue Davis, CBE Chief Executive: John Short

PALS Patient Advice and Liaison Service Customer Care Mon – Fri, 8am – 8pm
Tel: 0800 953 0045 Text: 07985 883 509 Email: pals@bsmhft.nhs.uk Website: www.bsmhft.nhs.uk




Improving mental health wellbeing

Appendix L

Confirmation of South Staffordshire and Shropshire NHS Foundation Trust

Research and Development department approval

South Staffordshire and Shropshire Healthcare 
NHS Foundation Trust

Our Ref: R296

1 July 2014

Ms Rebecca Matthews
Trainee Clinical Psychologist
Coventry and Warwickshire NHS Partnership Trust
St Michael's Hospital
St Michael's Road
Warwick CV34 5QW

A Keele University Teaching Trust
R&D Department
Block 7,
St George's Hospital
Corporation Street
STAFFORD ST16 3AG
Telephone: 01785 221 168

Dear *Rebecca*

Letter of access for research

As an existing NHS employee you do not require an additional honorary research contract with this NHS organisation. We are satisfied that such checks as are necessary have been carried out by your employer and that the research activities that you will undertake in this NHS organisation are commensurate with the activities you undertake for your employer. This letter confirms your right of access to conduct research through South Staffordshire and Shropshire Healthcare NHS Foundation Trust for the purpose and on the terms and conditions set out below. This right of access commences on **1 July 2014** and ends on **30 June 2015** unless terminated earlier in accordance with the clauses below.

You have a right of access to conduct such research as confirmed in writing in the letter of permission for research from this NHS organisation. Please note that you cannot start the research until the Principal Investigator for the research project has received a letter from us giving permission to conduct the project.

You are considered to be a legal visitor to South Staffordshire and Shropshire Healthcare NHS Foundation Trust premises. You are not entitled to any form of payment or access to other benefits provided by this organisation to employees and this letter does not give rise to any other relationship between you and this NHS organisation, in particular that of an employee.

While undertaking research through South Staffordshire and Shropshire Healthcare NHS Foundation Trust, you will remain accountable to your employer Coventry and Warwickshire NHS Partnership Trust but you are required to follow the reasonable instructions of your nominated manager **Caroline Carr, Clinical Nurse Specialist** in this NHS organisation or those given on her/his behalf in relation to the terms of this right of access.

Where any third party claim is made, whether or not legal proceedings are issued, arising out of or in connection with your right of access, you are required to co-operate fully with any investigation by this NHS organisation in connection with any such claim and to give all such assistance as may reasonably be required regarding the conduct of any legal proceedings.

You must act in accordance with South Staffordshire and Shropshire Healthcare NHS Foundation Trust policies and procedures, which are available to you upon request, and the Research Governance Framework.

You are required to co-operate with South Staffordshire and Shropshire Healthcare NHS Foundation Trust in discharging its duties under the Health and Safety at Work etc Act 1974 and other health and safety legislation and to take reasonable care for the health and safety of yourself and others while on South Staffordshire and Shropshire Healthcare NHS Foundation Trust premises. Although you are not a contract holder, you must observe the same standards of care and propriety in dealing with patients, staff, visitors, equipment and premises as is expected of a contract holder and you must act appropriately, responsibly and professionally at all times.

You are required to ensure that all information regarding patients or staff remains secure and *strictly confidential* at all times. You must ensure that you understand and comply with the requirements of the NHS Confidentiality Code of Practice (<http://www.dh.gov.uk/assetRoot/04/06/92/54/04069254.pdf>) and the Data Protection Act 1998. Furthermore you should be aware that under the Act, unauthorised disclosure of information is an offence and such disclosures may lead to prosecution.

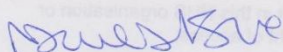
South Staffordshire and Shropshire Healthcare NHS Foundation Trust will not indemnify you against any liability incurred as a result of any breach of confidentiality or breach of the Data Protection Act 1998. Any breach of the Data Protection Act 1998 may result in legal action against you and/or your substantive employer.

You should ensure that, where you are issued with an identity or security card, a bleep number, email or library account, keys or protective clothing, these are returned upon termination of this arrangement. Please also ensure that while on the premises you wear your ID badge at all times, or are able to prove your identity if challenged. Please note that this NHS organisation accepts no responsibility for damage to or loss of personal property.

We may terminate your right to attend at any time either by giving seven days' written notice to you or immediately without any notice if you are in breach of any of the terms or conditions described in this letter or if you commit any act that we reasonably consider to amount to serious misconduct or to be disruptive and/or prejudicial to the interests and/or business of this NHS organisation or if you are convicted of any criminal offence. Your substantive employer is responsible for your conduct during this research project and may in the circumstances described above instigate disciplinary action against you.

If your circumstances change in relation to your health, criminal record, professional registration or any other aspect that may impact on your suitability to conduct research, or your role in research changes, you must inform the NHS organisation that employs you through its normal procedures. You must also inform your nominated manager in this NHS organisation.

Yours sincerely



Ruth Lambley-Burke
Head of R&D

Copies: HR department, Coventry & Warwickshire Partnership Trust, Wayside House,
Wilson's Lane, Coventry CV6 6NY

Appendix M

Participant Information Sheet

Coventry University
Priory Street, Coventry CV1 5FB
Telephone 024 7688 8328
Fax 024 7688 8702

Programme Director
Doctorate Course in Clinical Psychology
Dr Eve Knight
BSc Clin.Psy.D. CPsychol

THE UNIVERSITY OF
WARWICK

Coventry University

South Staffordshire and Shropshire Healthcare NHS
NHS Foundation Trust
A Keele University Teaching Trust

Fathers' experiences of their partner's first episode of postpartum psychosis

Participant Information Sheet

Part One

You are invited to take part in this research study. Before you decide, it is helpful for you to understand the purpose of the research and what will happen. The lead researcher of the study will contact you to go through this information sheet with you and answer any questions you have. You may talk to others about the study if you wish.

What is the purpose of the study?

The purpose of this study is to investigate fathers' experiences of having a partner who has had postpartum psychosis for the first time, which required admission to a Mother and Baby Unit (MBU). It is understood that postpartum psychosis can have a significant impact on the lives of women who experience it. However, less is known about how it affects their partners and their relationships. It is hoped that this research will help understanding of the difficulties fathers face in this situation.

This study is being completed by a Trainee Clinical Psychologist (the researcher) as part of a Doctorate of Clinical Psychology Programme, under supervision of the supervisors listed below.

Do I have to take part?

Your participation is entirely voluntary. You have been invited to take part as we are interested in your experiences, but it is your choice to take part. If you agree to take part, you will be asked to sign a consent form. You are free to withdraw at any time without giving a reason, 28th February 2015 when the final data analysis will take place. You can withdraw by contacting the lead researcher on the details below. This would not affect the standard of care you or your family receives. Your participation in this research is completely separate to your partner's care and will have no impact on their treatment.

What will happen to me if I take part?

If you agree to take part, the researcher will contact you to arrange to meet in a private room on the MBU to discuss the study, sign a consent form and provide some personal details. If you are happy to, the researcher will conduct an interview about your experiences in this meeting. If you would prefer for the interview to take place at a different time, this can be arranged.

Dean of Faculty of Health and Life Sciences
Professor Guy Daly Coventry University Priory Street Coventry CV1 5FB Tel 024 7679 5805

Head of Department of Psychology
Professor James Tresilian BSc PhD University of Warwick Coventry CV4 7AL Tel 024 7657 3009

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We understand that you may have other commitments and will try to arrange meetings for a time that is convenient for you. Only you and the researcher will be present and the interview will be recorded using a digital Dictaphone. The total meeting time, including the interview is expected to be approximately 2 hours. After the interview no further contact will be required, unless you wish to contact the researcher for any queries.

What are the possible risks of taking part?

The focus of this study means you will be asked about experiences of a difficult and personal nature. Whilst you are encouraged to only disclose information you feel comfortable to discuss, this may at times feel upsetting. You may have a break at any time during the interview if you begin to feel upset or uncomfortable. You do not have to answer any questions you do not wish to. Following the completion of the interview, or withdrawal from the study, you will be provided with details of support available should you feel you need it later. Please do not hesitate to contact the lead researcher if you have any problems or queries at any point in the research process.

What are the possible benefits of taking part?

There are no direct benefits or incentives offered for taking part in the research. Some people taking part may find it helpful to have space to talk about their experiences. Whilst we cannot promise that the research will help you, the findings may help services to provide better support for fathers experiencing similar difficulties in the future.

This completes part one. If this information has interested you and you are considering participation, please read the additional information in part two before deciding.

Part Two

Will my information be kept confidential and what will happen to it?

Whilst the focus of this study is on fathers' experiences, it is necessary to access your partner's medical records to confirm their diagnosis of postpartum psychosis. This will not be done by the researcher and will be done by a member of the MBU staff who will have routine access to this information. Your partner will need to consent to the access of their records for the research and as such will be informed of your wish to participate. If you do not consent for your partner to be aware of your involvement, you will be unable to participate in the research.

The information you provide will remain confidential in accordance with the Data Protection Act (1998). All electronic and paper copies of data will be stored securely and will only be accessed by the research team named on this sheet. When the interviews are transcribed your name and any personal identifying information will be changed or removed, so it will not be possible to identify you from the data. You may request to withdraw your data from the study up until 28th February 2015, when the final data analysis will take place. You can do so by contacting the lead researcher on the details below.

Your personal data will be safely destroyed on completion of the study. Due to University requirements, the research data (interview recordings, transcripts and analysis) will be kept securely for 5 years and safely destroyed after this time. This data will not be accessed unless requested by regulatory authorities linked to the researcher's University or NHS trust.

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When might confidentiality be broken?

There are some instances where the researcher may need to break confidentiality. This will happen if you disclose any information during the research process which causes the researcher serious concern that the health or safety of you or someone else may be at risk. The researcher is obliged to inform relevant authorities of any criminal activities. If possible the researcher will tell you that they need to break confidentiality and inform somebody else; this will usually be a member of the research supervision team or staff on the unit.

What will happen with the results of the study?

Once analysed and interpreted, your data will be used in a research report for a doctorate thesis and may be published. Your identity will not be revealed in any publication that may result from this study. The research findings will be shared with staff at the unit. Please note on the consent form if you would like to receive a written summary of the findings.

What if things go wrong? How can I complain?

If you have any concerns, you should speak to the researcher or one of their supervisors listed below who will do their best to answer your questions. If this is not satisfactory and you wish to complain formally, you can contact the trust's Patient Advice & Liaison Service (PALS) or Research and Development department, or the Universities of Coventry or Warwick.

Who has reviewed this study?

Before starting this study, it has been reviewed and received ethical approval from Coventry University Ethics Committee, the local NHS Research Ethics Committee and the NHS Trust's Research and Development Department.

Contact Details:

Lead researcher: **Becky Matthews**, Trainee Clinical Psychologist. Universities of Coventry and Warwick Doctorate of Clinical Psychology Programme

Email: matthe82@coventry.ac.uk

Research supervised by:

Dr Mary McGuinness, Consultant Clinical Psychologist, Perinatal Mental Health Service
Birmingham and Solihull Mental Health NHS Foundation Trust
Tel: 0121 301 2182/2180

Dr Fiona MacCallum, Associate Professor, University of Warwick
Tel: 02476 523182

Dr Carolyn Gordon, Academic Tutor, Coventry University
Tel: 02476 888328

If you wish to discuss taking part in this study or in research generally with someone independent of the study, you may contact a member of the ward staff or the following:

Caroline Carr, MBU Service Manager Tel: 01785 221554 Email: caroline.carr@sssft.nhs.uk

National Institute for Health Research www.nihr.ac.uk Email: enquiries@nihr.ac.uk

Patient Advice & Liaison Service (PALS) Tel (local): 01785 783028 Email: pals@sssft.nhs.uk

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Appendix N

Consent form

Coventry University
Priory Street, Coventry CV1 5FB
Telephone 024 7688 8328
Fax 024 7688 8702

Programme Director
Doctorate Course in Clinical Psychology
Dr Eve Knight
BSc Clin.Psy.D, CPsychol

THE UNIVERSITY OF WARWICK

Coventry University

Birmingham and Solihull NHS
Mental Health NHS Foundation Trust

Consent Form

<i>Fathers' experiences of their partner's first episode of postpartum psychosis</i>	Please tick
I confirm that I have read and understood the information sheet dated 14/01/2015 version 6. I have had the opportunity to consider the information and any questions I had have been answered satisfactorily.	<input type="checkbox"/>
I understand that my participation is completely voluntary and that I am free to withdraw at any time without giving reason, without my care being affected. I understand I can withdraw my information at any time until 28 th February 2015.	<input type="checkbox"/>
I understand that I cannot be identified from the information I provide for the study and my contributions will be made anonymous.	<input type="checkbox"/>
I understand that interviews will be recorded by Dictaphone and that recordings will be stored securely and separately from any written data collected.	<input type="checkbox"/>
I understand that data collected during the study, may be looked at by the named researchers from Universities of Coventry and Warwick, research supervisors and regulatory authorities where it is relevant to my taking part in this research. I give permission for these individuals to have access to my data.	<input type="checkbox"/>
I understand that the research data collected will be retained for 5 years before being destroyed, in line with University requirements.	<input type="checkbox"/>
I understand that I can contact the researchers above at any point if there is anything that is not clear, if I would like more information about the study, or if I were to experience distress as a result of participating and require support.	<input type="checkbox"/>
I understand that my partner will be made aware of my participation in the study and will be asked to provide verbal consent for access to her care records for the purpose of the research.	<input type="checkbox"/>
I understand that the information I provide for the study will remain confidential, except in the instance that the researcher has serious concerns that my own or	<input type="checkbox"/>

Dean of Faculty of Health and Life Sciences
Professor Guy Daly Coventry University Priory Street Coventry CV1 5FB Tel 024 7679 5805

Head of Department of Psychology
Professor James Tresilian BSc PhD University of Warwick Coventry CV4 7AL Tel 024 7657 3009

Version 6 14/01/2015

someone else's health or safety may be at risk. I understand that where possible the researcher will tell me that they need to break confidentiality.	
I agree to take part in the above study.	<input type="checkbox"/>
I wish to receive a written summary of the research findings when the study is completed. This can be sent to me at (please provide email or postal address):	Yes/ No

_____	_____	_____
Name of Participant	Date	Signature

_____	_____	_____
Name of Person taking consent.	Date	Signature

Appendix O

Recruitment poster

Version 2 01/04/2014



FATHERS: We want to hear from you!

*A study of fathers' experiences of their partner's first
episode of postpartum psychosis*

We are looking for fathers whose partner is currently experiencing their first episode of postpartum (puerperal) psychosis to take part in some research. **We would like to invite fathers to talk about their experiences during this time.**




If you are interested in this study and would like to find out more about taking part, **please speak to a member of staff** who will be able to give you some written information.

You may also contact the lead researcher:

Becky Matthews
Trainee Clinical Psychologist
matthe82@coventry.ac.uk

Appendix P

Demographic information form

Coventry University Priority Street, Coventry CV1 5FB Telephone 024 7688 8328 Fax 024 7688 8702 Programme Director Doctorate Course in Clinical Psychology Dr Eve Knight BSc Clin.Psy.D. CPsychol	THE UNIVERSITY OF WARWICK	 Coventry University
	Birmingham and Solihull Mental Health NHS Foundation Trust	

Fathers' experiences of their partner's first episode of postpartum psychosis

Demographic information collection form

Please answer the following questions about your background:

1) How old are you? (Age in years)	<input type="text"/>
2) How would you describe your ethnicity? (Please tick appropriate box)	
White-British/Irish <input type="checkbox"/>	White-Other (please specify) <input type="checkbox"/>
Asian/Asian British <input type="checkbox"/>	Black/African/Caribbean/Black British <input type="checkbox"/>
Mixed/Multiple Ethnic Groups <input type="checkbox"/>	Other (please specify) <input type="checkbox"/>
3) What is the highest level of education you have completed? (Please tick)	
No formal qualification <input type="checkbox"/> School certificate, O levels, GCSEs or equivalent <input type="checkbox"/>	
Higher school certificate, A-levels, BTEC or equivalent <input type="checkbox"/>	
Undergraduate Degree, diploma or equivalent <input type="checkbox"/>	
Postgraduate Qualification e.g. Masters, Doctorate or equivalent <input type="checkbox"/>	
Other (please specify) <input type="checkbox"/>	
4) How would you describe your current occupation?	
Employed – job requiring professional training <input type="checkbox"/> Employed – no professional training <input type="checkbox"/>	
Part/Full time student <input type="checkbox"/> Voluntary work <input type="checkbox"/> Carer/parent <input type="checkbox"/> Unemployed <input type="checkbox"/>	
Other (please specify) <input type="checkbox"/>	
5) How many children do you have? (Including the infant currently known to the Mother & Baby Unit)	
<input type="text"/>	

Dean of Faculty of Health and Life Sciences Professor Guy Daly Coventry University Priority Street Coventry CV1 5FB Tel 024 7679 5805 Head of Department of Psychology Professor James Treasillian BSc PhD University of Warwick Coventry CV4 7AL Tel 024 7657 3009	Version 2 14/01/2014
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6) What is your relationship status with the mother of your child?

Married/Engaged ☐ Cohabiting, but not married/engaged ☐

Not cohabiting, but in a relationship ☐ Separated ☐

7) Have you ever personally experienced a mental health problem? (e.g. depression, anxiety, schizophrenia, bipolar disorder)

Yes ☐

No ☐

If yes, did you receive mental health services?

No ☐ Yes, primary care services (e.g. GP/IAPT) ☐

Yes, secondary care services (e.g. CMHT) ☐

Version 2 14/01/2014

Appendix Q


Debriefing information sheet

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Priory Street, Coventry CV1 5FB
Telephone 024 7688 8328
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Programme Director
Doctorate Course in Clinical Psychology
Dr Eve Knight
BSc Clin.Psy.D. OPsychol

THE UNIVERSITY OF
WARWICK

Coventry University



Birmingham and Solihull NHS
Mental Health NHS Foundation Trust

Debriefing Sheet

Fathers' experiences of their partner's first episode of postpartum psychosis

Lead researcher: **Becky Matthews**

Email: matthe82@coventry.ac.uk

Thank you for taking part in this study, your participation is greatly appreciated. Please see the Participant Information Sheet for information about what will happen to the data collected during and after completion of the study. If you have requested for a summary of the research findings, this will be sent to you in approximately August/September 2015. If you have any questions about the research at a later date, you may contact the lead researcher.

We understand that due to the sensitive nature of the topics discussed, this may have at times been distressing. If you have any problems or queries related to the study itself please contact the lead researcher on the details above. The Mother and Baby Unit can offer support for fathers who would like more information about their partner's condition, treatment and issues relating to the unit. Please speak to the Ward Manager or Consultant Psychiatrist if you would like to talk about this.

If you would like to seek further support, you may wish to contact one of the following organisations:

Action on Postpartum Psychosis
Information, support and resources anyone affected by postpartum psychosis.
www.app-network.org Tel: 02033229900 Email: app@app-network.org

Dean of Faculty of Health and Life Sciences
Professor Guy Daly Coventry University Priory Street Coventry CV1 5FB Tel 024 7679 5805

Head of Department of Psychology
Professor James Tresilian BSc PhD University of Warwick Coventry CV4 7AL Tel 024 7657 3003

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www.coventry.ac.uk

Mind

Information and support for those experiencing mental health problems, families and carers.

www.mind.org.uk

Tel: 02085192122

Email: contact@mind.org

Samaritans

Confidential support, available 24 hours a day 365 days a year.

www.samaritans.org

Tel: 0845909090

Email: jo@samaritans.org

Carers UK

Practical, emotional and financial advice and support for carers.

www.carersuk.org

Tel: 08088087777

Email: advice@carersuk.org

NHS Choices: Carers Direct

Information, advice and support for carers from the NHS and social services.

www.nhs.uk/carersdirect

Tel: 03001231053

We hope that you find this helpful. Please contact the researcher if you have any questions.

Appendix R Example of coding a transcript using IPA

Note: Plain text = descriptive comments, *Italic text* = language comments, Underlined text = conceptual/exploratory comments

I = interviewer P = participant

Line	Transcript	Exploratory Comments	Emergent Themes
834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853	<p>I: And how has that been for you to kind of see that happening, so from you described, kind of, um, it feeling a bit like (partner's name) was dead almost (P: hmm), and then to see things come back to almost normal by the sounds of it, how has it been for you to kind of see that happen?</p> <p>P: Relieved (I: hmm), now. Um, it's like being given your family back (I: yeah). When you think they're not there anymore. Don't know how to explain it but that's what it's like. It's like, um, it's just a feeling of relief I suppose (I: hmm). It's like, you know like, sometimes when you have a dream about something, um, you know like sometimes you have a really bad dream like your parents have died or you've crashed a car (I: yeah). And like, you know meanings, sort of thing, and you have really bad dreams and you wake up and you're like, 'ah, that was a dream. Thank god it's over'. It's sort of like that. It's like, thank god it's over. You know, it's the same sort of feeling to have them back (I: hmm). That's what it's like. But, that's all</p>	<p>Being given your family back – <u>something external has taken them away and given them back. Baby included in this, contrast to earlier</u></p> <p><i>Don't know how to explain it</i></p> <p>Relief</p> <p>Metaphor - It's sort of like waking up from a bad dream 'Thank god it's over' – <u>unrealness of situation, similar to psychosis itself, a disconnection from reality experienced by him as well as partner</u></p>	<p>Identity as a family Power/control</p> <p>Unreal situation – disconnected from reality</p>

854	I've got to say really (I: yeah). I don't know –	<i>That's all I've got to say really (end of conversation)</i>	
855	I: Um, how do you kind of view (partner's name) and		
856	your relationship with (partner's name) now?		
857	P: Back to normal (I: yeah). It just feels like going back	Now relationship feels back to normal	
858	to normal (I: hmm). It feels like, like I said, you know		Looking forward
859	um, you know when it feels like a certain part didn't		
860	exist, never happened. Feels like that. When	Feels like it never happened/existed – like bad dream above	Disconnecting from
861	(partner's name) was over on the weekend, it just	<u>Leaving experience behind – denying permanent effects</u>	experience
862	feels like, we've gone back two months. Cut out this	Feels like we've gone back two months. That part has been cut	
863	part and everything's gone back to normal (I: hmm). It	out and everything's back to normal	
864	just feels like that (I: yeah). It was, like I said, it's relief.	Relief	
865	And it's weird because I forgot, it's not that, it's really	Weird – I forgot how to be happy (<i>queried use of 'forgot'</i>)	Role as partner/parent
866	weird, it's not like I'd forgot how to be happy. But I, I	I changed my personality, like I said. It was like being	Identity
867	changed my personality, like I said. It was like being	<u>I changed my personality – implies choice in this?</u>	
868	single and it was like I was doing the casinos and	It was like being single	
869	things again and drinking and whatever and doing as I		
870	am. But anyway, um, I f-, I, I wasn't, I'm, I'm, like I		Disconnecting from self/
871	said, I'm normal, I'm fine, blah blah blah, but I'm	I said I'm normal but I'm normally bubbly and loud – I hadn't	emotions
872	normally a bit ec-, I wouldn't say eccentric but I'm like	been like that but I didn't realise at the time	
873	bubbly and loud and (I: hmm). I'm loud anyway but		
874	I'm even more bubbly and stupider but, and I hadn't		
875	been like that, but I didn't realise I hadn't been like		
876	that. Yeah, um, when (partner's name) was here, I felt	When partner came home I felt happiness or excitement	Connectedness with partner
877	like that again, I felt like, um, I don't know, it could be	<i>(unsure of wording)</i> – <u>losing her meant losing a part of himself,</u>	Hope
878	happiness (I: hmm), or it could be excitement I don't	<u>without him realising</u>	Reconnection
879	know but that, that feeling I always have when		

880	(partner's name)'s been there, for four years, had	Those feelings had been taken away (but I didn't realise) –	
881	obviously that had been taken away (I: yeah). But I	<u>externalising – something took them away</u>	Control/power
882	didn't realise that had been taken away. When		Love
883	(partner's name) come back, I, I knew. I could feel that		
884	um, so, like a tingling (I: hmm). You know when like	I'm always happy/tingling with her	
885	your hand's tingling. Like that, all the time. That's how		
886	I am when I'm with (partner's name). It's like I'm	Likens self to a child when with partner	Connecting with child identity
887	always happy. Always, wanna do something stupid (I:		
888	hmm). A bit like a kid. But I had that back. You know,	I don't know what to call it (querying of emotional language –	
889	it's like I call it happiness but I suppose it's not	other examples earlier in interview)	
890	happiness, I don't know what it is (I: hmm). But, like I		
891	said, um, oh, it's like a relief to have my happiness		
892	back again (I: yeah). That's how it feels, for things to		
893	just come back. And then some of those emotions		
894	that you forgot about, like happiness, it could be	Noticed it coming back, but hadn't realised it had gone	
895	happiness or it could be excitement, I don't know	<u>(Perhaps related to coping style, trying to look for answers or</u>	
896	what it is, but that come back (I: hmm). So, I noticed	<u>simple solutions, pushing others away, acting as though single,</u>	Disconnecting from own
897	that coming back but I hadn't realised that it had gone	<u>feeling angry at staff etc – didn't pay attention to his own</u>	feelings
898	(I: ok). Yeah.	<u>feelings behind this?)</u>	
899	I: Ok, and looking back on that time where it wasn't		
900	there, now, um, how do you think you did think about		
901	(partner's name) and your relationship with (partner's		
902	name) at that time, kind of looking back?		
903	P: I just thought, like I said, um (pause). Like I said I		
904	didn't think that I had a relationship because like I said		Partner's change of identity
905	I thought that she was dead (I: hmm). Well, I didn't	Her personality was dead – <i>moved from literal to metaphorical,</i>	Abandonment/loss

906	think she was dead, obviously I knew that she was	<u>something more meaningful/interpersonal</u>	
907	here but I thought her personality was dead, so my		
908	relationship with her personality is dead. Because		
909	even though she looks the same (I: hmm), if she's not	I don't care about looks – I had a relationship with her	Connectedness with partner
910	her, I don't care about what you look like, she could	personality – <u>what had attracted him to her had gone, being</u>	
911	look like anything, that doesn't matter, but I have a	<u>left?</u>	
912	relationship with her personality (I: yeah). And my		
913	personality clicks with her personality, yeah, and if		Hopelessness
914	she's not there, then, um, my personality, our	If she's not there – our relationship isn't there	Abandonment
915	relationship isn't there (I: hmm). So, and, for me, it	<u>(fear of long term consequences of illness?)</u>	
916	felt like she was dead. So when I was at home I felt		
917	like I was single (I: hmm). I felt like I'd lost everything,	Lost everything and on my own again	
918	so I was on my own again (I: yeah). Not again, they	<u>(loss, mourning)</u>	
919	haven't been away for very long. But, you get the	'They hadn't been away for very long' though – <u>change in</u>	Fearing the worst –
920	point.	<u>perception of time? Things feel more long-term/permanent?</u>	permanence of changes, life
921	I: Yeah. And how did you feel about that?	<u>Similar to things getting better – illness period had been 'cut</u>	changing?
922	P: Um, I wasn't upset (I: hmm). Well, I suppose that I	<u>out', now focused on being 'normal'</u>	
923	was, but um, I don't know. It's like when you watch,		
924	when I watch films, um, the noticeable thing is, when I		
925	watch films I don't get upset. I watch, um, I don't		
926	know what I watch, I can watch 'The pursuit of	When I watch films I don't cry/get upset – but then they upset	
927	happiness', anything, I don't cry, I don't get upset. But	me more. <u>Reconnecting with his feelings?</u>	
928	it's, ur, all those films seemed to upset me more (I:		
929	hmm). It's as if I wasn't as happy, so when I did drop,	When I dropped, it was even further than usual	
930	it dropped even further than it would usually drop. It's		Disconnecting from feelings
931	like, it's as if they were more upsetting than usual.	<u>Forgot question again (when discussing emotions – seems to</u>	

932	Um, like I said. I forgot the original question again.	<u>say forgot original question more?)</u>	
933	I: Um, I was asking what it was like at that time where,		
934	um, you were feeling like kind of (partner's name) was		
935	dead or –		
936	P: Yeah, so. It's, it's not, I didn't feel upset all the time.	I'd act normal – which is why I didn't notice I'd lost happiness	Connectedness with partner
937	So I had a little walk around and I'd act normal and I	<u>(coping style)</u>	
938	was, I felt normal. But, like I said, that's why when		
939	(partner's name) came back and that happiness came	<u>Not being connected to self – didn't notice own feelings,</u>	Disconnection from self
940	back (I: hmm). I noticed that it had come back but I	<u>perhaps reflecting other people not noticing/not paying</u>	Not being heard
941	hadn't noticed that I had lost it (I: yeah). If that makes	<u>attention to him e.g. staff?</u>	
942	sense? Look, at the time I didn't feel like I was upset		
943	or anything but I noticed the, the biggest difference		
944	was how much more upset I was watching these films	Didn't notice I was upset except for when watching films	
945	(I: hmm), compared to where I was before (I: ok).		
946	Where I didn't give a monkeys (I: hmm). But I probably		
947	wouldn't give a monkeys now (I: yeah) (both laugh).		
948	I: Ok. Um, and what kind of support did you have		
949	around you, if any, um, during that time?		
950	P: I thought, everyone tried to offer support but I	Refused support from everyone. I was on my own	Relationship with help
951	refused from everybody. So I was on my own. That's		
952	when, that's, everybody offered support. But I didn't		
953	want it (I: hmm). So no, I called nobody. I sat, if I was		
954	at home I was on my own. Um, I occasionally went out		
955	on my own. But I couldn't, like I said, even then I'd go		
956	out on my own (I: hmm). I didn't have to go out on my		
957	own, I could call my friend or I could call my, if I called		

958	my dad, any time, it could be midnight, if I wanted to	I didn't have to be on my own, support would have been there,	Identity
959	do something and I said to him like, 'will you come	but I didn't want it – <u>he chose to be alone, not acceptable for</u>	Disconnection from others,
960	out?'. He would have (I: hmm). If I said, 'dad, do you	<u>him to reach out for help, needed to show he could do it alone?</u>	separation
961	want to meet me at the pub?', he would have come		
962	out. He would, he would have known I was upset or		
963	needed someone there, he would have just, it		
964	wouldn't have even been a, a thought. But (I: yeah), I		
965	didn't want that support. I wanted to be out. I wanted		
966	to, I wanted to sort of build a life for myself. And I did,		
967	I went out on my own and built this stuff on my own		Relationship with help
968	(I: hmm). I honestly, I went the pub on my own. I		
969	never ever go the pub on my own. I can. And I went		
970	clubbing on my own (I: hmm). I did it all on my own (I:	I wanted to build a life for myself, so I did. I did it all on my own	
971	hmm). But, I didn't have to. But I did (I: yeah).	<u>- 'I don't need other people' – fierce independence, too hurtful</u>	
972	I: And what was the kind of thinking behind that, do	<u>to connect to anyone other than partner?</u>	
973	you think?		
974	P: I suppose I, I needed to try and survive on my own	I needed to survive on my own – life and death	Transitions – life and death
975	(I: hmm). That's all I was mainly doing, trying to	language/metaphors – 'I'm not going to die all of a sudden but-'	Permanence
976	survive on my own (I: hmm). And I, I, like I said, it was		
977	a different life, but I can physically survive. I'm not	<u>(related to sense of permanence of situation/not knowing what</u>	Looking to a different future
978	going to die just, all of a sudden (I: hmm). But, yeah.	<u>will happen in the future – therefore needed to build a new life</u>	
		<u>if old one had been lost)</u>	

Appendix S

Author instructions for Reflective Practice

Manuscript preparation

1. General guidelines

- Manuscripts are accepted in English. British English spelling and punctuation are preferred. Please use single quotation marks, except where 'a quotation is "within" a quotation'. Long quotations of 40 words or more should be indented with quotation marks. No Article types required
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